

# David H. Gotz, PhD

**Associate Professor, Information Science**  
**Assistant Director, Carolina Health Informatics Program**  
**Associate Member, Lineberger Comprehensive Cancer Center**  
*University of North Carolina at Chapel Hill*  
*School of Information and Library Science*  
*201 Manning Hall, CB #3360*  
*Chapel Hill, NC 27599*

*gotz@unc.edu*  
*919-962-3435*  
*http://gotz.web.unc.edu*

## CURRENT APPOINTMENTS

**School of Information and Library Science at the University of North Carolina at Chapel Hill**  
Associate Professor, Information Science  
2014 – Present

**Carolina Health Informatics Program at the University of North Carolina at Chapel Hill**  
Assistant Director  
2014 – Present

**Department of Computer Science at the University of North Carolina at Chapel Hill**  
Adjunct Associate Professor, Computer Science  
2019 – Present

**University of North Carolina Lineberger Comprehensive Cancer Center**  
Associate Member  
2014 – Present

## EDUCATION

**University of North Carolina at Chapel Hill**  
Ph.D. in Computer Science, 2005  
Dissertation Title: Scalable and Adaptive Streaming for Non-Linear Media  
M.S. in Computer Science, 2001

**Georgia Institute of Technology**  
B.S. in Computer Science, 1999, with Highest Honors  
Certificate in Economics, 1999

## PROFESSIONAL EXPERIENCE PRIOR TO CURRENT APPOINTMENT

**T. J. Watson Research Center at IBM Research**  
Research Scientist  
2006 - 2013

**T. J. Watson Research Center at IBM Research**  
Post-Doctoral Research Scientist  
2005 – 2006

**UNC-Chapel Hill Computer Science Department, Multimedia Research Group**  
Research Assistant  
2001 – 2005

**Bell Labs, Multimedia Communications Research Lab**

Research Intern  
Summer 2001

**UNC-Chapel Hill Computer Science Department, Office of the Future Group**

Research Assistant  
1999 – 2001

**Naval Research Labs, Virtual Reality Lab**

Research Intern  
Summer 1999

**Bell Labs, Multimedia Communications Research Lab**

Research Intern  
Summer 1998

**Georgia Institute of Technology, Virtual Environments Group**

Undergraduate Research Assistant  
1997 – 1999

**Bell Communications Research**

Intern  
Summers 1995, 1996, 1997

**HONORS**

- 2019 RTI University Scholar
- 2019 IEEE VIS Best Paper Award
- 2018 ACM CHI Honorable Mention Award
- 2017 ACM Computing Reviews “Best of Computing” honoree
- 2016 ACM IUI paper was recognized with the ACM IUI Best Paper Award
- 2015 Named a Data Fellow by National Consortium for Data Science
- 2013 IBM Research Accomplishment Award received for the scientific and commercial impact of medical informatics research (*for new research not previously recognized in 2012*)
- 2012 IBM Research Accomplishment Award received for the scientific and commercial impact of medical informatics research
- 2010 AMIA paper selected as a Distinguished Paper Award nominee
- 2008 IEEE VAST paper awarded as a top paper via selection for journal publication
- 2006 ACM Multimedia paper awarded as a top paper via selection for journal publication

## BIBLIOGRAPHY

### PEER REVIEWED JOURNAL & HIGHLY SELECTIVE CONFERENCE<sup>1</sup> ARTICLES

1. **David Gotz**, Jonathan Zhang, Wenyuan Wang, Joshua Shrestha, David Borland. Visual Analysis of High-Dimensional Event Sequence Data via Dynamic Hierarchical Aggregation. *IEEE Transactions on Visualization and Computer Graphics (To Appear, Volume 26, Number 1, 2020)*.
2. David Borland, Wenyuan Wang, Jonathan Zhang, Joshua Shrestha, **David Gotz**. Selection Bias Tracking and Detailed Subset Comparison for High-Dimensional Data. *IEEE Transactions on Visualization and Computer Graphics (To Appear, Volume 26, Number 1, 2020)*.
3. Bryce Morrow, Trevor Manz, Arlene E. Chung, Nils Gehlenborg, **David Gotz**. Periphery Plots for Contextualizing Heterogeneous Time-Based Charts. *To appear, IEEE VIS 2019, Short Papers*.
4. Danny T.Y. Wu PhD, Annie T. Chen, John D. Manning, Gal Levy-Fix, Uba Backonja, David Borland, Jesus J. Caban, Dawn W. Dowding, Harry Hochheiser, Vadim Kagan, Swaminathan Kandaswamy, Manish Kumar, Alexis Nunez, Eric Pan, **David Gotz**. Evaluating Visual Analytics for Health Informatics Applications: A Systematic Review from the AMIA VIS Working Group Task Force on Evaluation. *Journal of the American Medical Informatics Association (JAMIA) (Volume 26, Number 4, 2019)*.
5. **David Gotz**, Wenyuan Wang, Annie T. Chen, David Borland. Visualization Model Validation via Inline Replication. *Information Visualization (Sage OnlineFirst, Published January 25, 2019)*.
6. Shunan Guo, Zhuochen Jin, **David Gotz**, Fan Du, Hongyuan Zha, Nan Cao. Visual Progression Analysis of Event Sequence Data. *IEEE Transactions on Visualization and Computer Graphics (IEEE Early Access; to appear Volume 25, Number 1, 2019)*.
7. David Borland, Wenyuan Wang, **David Gotz**. Contextual Visualization: Making the Unseen Visible to Combat Bias During Visual Analysis. *IEEE Computer Graphics and Applications (CG&A) (Volume 38, Number 6, 2018)*.
8. Sigfried Gold, Andrea Batch, Robert McClure, Guoqian Jiang, Hadi Kharrazi, Rishi Saripalle, Vojtech Huser, Chunhua Weng, Nancy Roderer, Ana Szarfman, Niklas Elmqvist, **David Gotz**. Clinical Concept Value Sets and Interoperability in Health Data Analytics. *Proceedings of the AMIA Annual Symposium (San Francisco, November 2018)*.
9. Arlene E. Chung, Ashley C. Griffin, Dasha Selezneva, **David Gotz**. Health and Fitness Apps for Hands-Free Voice-Activated Assistants: Content Analysis. *JMIR mHealth and uHealth (Volume 6, Number 9, 2018)*.
10. Han Yu, Brian Chapman, Arianna Di Florio, Ellen Eischen, **David Gotz**, Mathews Jacob, Rachael Hageman Blair. Bootstrapping estimates of stability for clusters, observations and model selection. *Computational Statistics (Online First, August 30, 2018)*.
11. Saif Khairat, George Cameron Coleman, Samantha Russomagno, **David Gotz**. Assessing the Status Quo of EHR Accessibility, Usability, and Knowledge Dissemination. *eGEMs (Volume 6, Issue 1, 2018)*.

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<sup>1</sup> In the Computer Science literature, conference proceedings are highly selective, and typically as prestigious (if not more prestigious) than journals. As a result, highly-selective conferences are generally considered the most respected types of publication within this community.

12. Ke Xu, Shunan Guo, Nan Cao, **David Gotz**, Aiwen Xu, Huamin Qu, Zhenjie Yao, Yixin Chen. ECGLens: Interactive Visual Exploration of Large Scale ECG Data for Arrhythmia Detection. *Proceedings of ACM CHI (2018)*.
13. Shunan Guo, Ke Xu, Rongwen Zhao, **David Gotz**, Hongyuan Zha, and Nan Cao. EventThread: Visual Summarization and Stage Analysis of Event Sequence Data. *IEEE Transactions on Visualization and Computer Graphics (Volume 24, Number 1, 2018)*.
14. Manish Kumar, **David Gotz**, Tara Nutley, and Jason B. Smith. Research Gaps in Routine Health Information System Design Barriers to Data Quality and Use in Low- and Middle-Income Countries: A Literature Review. *International Journal of Health Planning and Management (Published online on August 2, 2017. To appear in print.)*.
15. **David Gotz**, Shun Sun, Nan Cao, Rita Kundu, Anne-Marie Meyer. Adaptive Contextualization Methods for Combating Selection Bias During High-Dimensional Visualization. *ACM Transactions on Interactive Intelligent Systems (Volume 7, Issue 4, 2017)*.
16. Chanin T. Woods, Lela Lackey, Benfeard Williams, Nikolay V. Dokholyan, **David Gotz**, and Alain Laedearch. Comparative visualization of the RNA suboptimal conformational ensemble in vivo. *Biophysical Journal (Published online on June 15, 2017. To appear in print.)*.
17. Hanfei Lin, Siyuan Gao, **David Gotz**, Fan Du, Jingrui He, and Nan Cao. RCLens: Interactive Rare Category Exploration and Identification. *IEEE Transactions on Visualization and Computer Graphics (Published online on June 6, 2017. To appear in print.)*.
18. Nan Cao Yu-Ru Lin, **David Gotz**, Fan Du. Z-Glyph: Visualizing Outliers in Multivariate Data. *Information Visualization (Published "Online First" February 14, 2017)*.
19. Yingcai Wu, Nan Cao. **David Gotz**, Yap-Peng Tan, Daniel Keim. A Survey on Visual Analytics of Social Media Data. *IEEE Transactions on Multimedia (Volume 18, Issue 11, 2016)*.
20. Nan Cao. Yingcai Wu, **David Gotz**, Daniel Keim, Yap-Peng Tan. Guest Editorial: Visual Analytics in Multimedia—Opportunities and Research Challenges. *IEEE Transactions on Multimedia (Volume 18, Issue 11, 2016)*.
21. **David Gotz** and David Borland. Data-Driven Healthcare: Challenges and Opportunities for Interactive Visualization. *IEEE Computer Graphics and Applications (Volume 36, Issue 2, pp. 90 – 96, 2016)*.
22. **David Gotz**, Shun Sun, and Nan Cao. Adaptive Contextualization: Combating Bias During High-Dimensional Visualization and Data Selection. *Proceedings of the ACM International Conference on Intelligent User Interfaces (pp. 85 – 95, 2016), Sonoma, California*.
23. Nan Cao, Yu-Ru Lin, and **David Gotz**. UnTangle Map: Visual Analysis of Probabilistic Multi-Label Data. *IEEE Transactions on Visualization and Computer Graphics (Volume 22, Issue 2, pp. 1149 – 1163, 2016)*.
24. Zhiyuan Zhang, **David Gotz**, and Adam Perer. Iterative Cohort Analysis and Exploration. *Information Visualization (Volume 14, Number 4, pp. 289 – 307, 2015)*.
25. Jesus Caban and **David Gotz**. Visual Analytics in Healthcare – Opportunities and Research Challenges. *Journal of the American Medical Informatics Association (JAMIA) (Volume 22, Issue 2, pp. 260 – 262, 2015)*.

26. **David Gotz** and Harry Stavropoulos. DecisionFlow: Visual Analytics for High-Dimensional Temporal Event Sequence Data. *IEEE Transactions on Visualization and Computer Graphics* (Volume 20, Issue 12, pp. 1783 – 1792, 2014).
27. Charles D. Stolper, Adam Perer, and **David Gotz**. Progressive Visual Analytics. *IEEE Transactions on Visualization and Computer Graphics* (Volume 20, Issue 12, pp. 1653 – 1662, 2014).
28. Yu-Ru Lin, Nan Cao, **David Gotz** and Lu Lu. UnTangle: Visual Mining for Data with Uncertain Multi-Labels Via Triangle Map. *Proceedings of the IEEE International Conference on Data Mining* (pp. 340 – 349, 2014). Shenzhen, China.
29. **David Gotz**, Fei Wang, and Adam Perer. A Methodology for Interactive Mining and Visual Analysis of Clinical Event Patterns Using Electronic Health Record Data. *The Journal of Biomedical Informatics* (Volume 48, pp. 148 – 159, 2014).
30. **David Gotz** and Krist Wongsuphasawat. Interactive Intervention Analysis. *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium* (pp. 274 – 280, 2012), Chicago, Illinois.
31. **David Gotz**, Harry Stavropoulos Jimeng Sun, and Fei Wang. ICDA: A Platform for Intelligent Care Delivery Analytics. *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium* (pp. 264 – 273, 2012), Chicago, Illinois.
32. Krist Wongsuphasawat and **David Gotz**. Exploring Flow, Factors, and Outcomes of Temporal Event Sequences with the Outflow Visualization. *IEEE Transactions on Visualization and Computer Graphics* (Volume 57, Number 5, pp. 2659 – 2668, 2012).
33. **David Gotz**, Jimeng Sun, Nan Cao. Multifaceted Visual Analytics for Healthcare Applications. *IBM Journal of Research and Development* (Volume 56, Number 5, pp. 492 – 503, 2012).
34. Nan Cao, **David Gotz**, Jimeng Sun, Yu-Ru Lin, and Huamin Qu. SolarMap: Multifaceted Visual Analytics for Topic Exploration. *Proceedings of the IEEE International Conference on Data Mining* (pp. 101 – 110, 2011), Vancouver, Canada.
35. **David Gotz**, Jimeng Sun, Nan Cao, and Shahram Ebadollahi. Visual Cluster Analysis in Support of Clinical Decision Intelligence. *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium* (pp. 481 – 490, 2011), Washington, DC.
36. Joseph Bigus, Murray Campbell, Boaz Carmeli, Melissa Cefkin, Henry Chang, Ching-Hua Chen-Ritzo, William Cody, Shahram Ebadollahi, Alexandre Evmievski, Ariel Farkash, Susanne Glissmann, **David Gotz**, Tyrone Grandison, Daniel Gruhl, Peter Haas, Mark Hsiao, Pei-Yun Hseuh, Jianying Hu, Joseph Jasinski, James Kaufman, Cherly Kieliszewski, Martin Kohn, Sarah Knoop, Paul Maglio, Ronald Mak, Haim Nelken, Chalapathy Neti, Hani Neuvirth, Yue Pan, Yarden Peres, Sreeram Ramakrishnan, Michal Rosen-Zvi, Sondra Renly, Pat Sellinger, Amnon Shab, Robert Sorrentino, Jimeng Sun, Tanveer Syeda-Mahmood, Wang-Chiew Tan, Ying Tao, Reza Yaesoubi, and Xinxin Zhu. Information Technology for Healthcare Transformation. *IBM Journal of Research and Development* (Volume 55, Number 5, pp. 492 – 505, 2011).
37. Nan Cao, **David Gotz**, Jimeng Sun and Huamin Qu. DICON: Interactive Visual Analysis of Multidimensional Clusters. *IEEE Transactions on Visualization and Computer Graphics* (Volume 17, Number 12, pp. 2581 – 2590, 2011).
38. Shahram Ebadollahi, Jimeng Sun, **David Gotz**, Jianying Hu, Daby Sow, and Chalapathy Neti. Predicting Patient's Trajectory of Physiological Data using Temporal Trends in Similar Patients:

- A System for Near-Term Prognostics. *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium* (pp. 192-196, 2010), Washington, DC.
39. Nan Cao, Jimeng Sun, Yu-Ru Lin, **David Gotz**, Shixia Liu and Huamin Qu. FacetAtlas: Multifaceted Visualization for Rich Text Corpora. *IEEE Transactions on Visualization and Computer Graphics* (Volume 16, Number 6, pp. 1172 – 1181, 2010).
  40. Jimeng Sun, **David Gotz** and Nan Cao. DiseaseAtlas: Multi-facet Visual Analytics for Online Disease Articles. *Proceedings of IEEE Engineering in Medicine and Biology Society* (pp. 1123 – 1126, 2010), Buenos Aires, Argentina.
  41. **David Gotz** and Michelle X. Zhou. Characterizing User’s Visual Analytic Activity for Insight Provenance. *Information Visualization* (Volume 8, Number 1, pp. 42 – 55, 2009).
  42. Yedendra Shrinivasan and **David Gotz**. Connecting the Dots in Visual Analysis. *Proceedings of IEEE Visual Analytics Science and Technology* (pp. 123 – 130, 2009), Atlantic City, New Jersey.
  43. **David Gotz** and Zhen Wen. Behavior-Driven Visualization Recommendation. *Proceedings of ACM Intelligent User Interfaces* (pp. 315 – 324, 2009), Sanibel, Florida.
  44. Wen-Huang Cheng and **David Gotz**. Context-Based Page Unit Recommendation for Web-Based Sensemaking Tasks. *Proceedings of ACM Intelligent User Interfaces* (pp. 107 – 116, 2009), Sanibel, Florida.
  45. **David Gotz** and Michelle X. Zhou. Characterizing Users’ Visual Analytic Activity for Insight Provenance. *Proceedings of IEEE Visual Analytics Science and Technology* (pp 123 – 130, 2008), Columbus, Ohio.
  46. Ketan Mayer-Patel and **David Gotz**. Scalable and Adaptive Streaming for Non-Linear Media. *IEEE MultiMedia* (Volume 14, Number 3, pp. 68 – 83, 2007).
  47. **David Gotz**. Scalable and Adaptive Streaming for Non-Linear Media. *Proceedings of ACM Multimedia* (pp. 357 – 366, 2006), Santa Barbara, California.
  48. **David Gotz** and Michelle X. Zhou, Vikram Aggarwal. Interactive Visual Synthesis of Analytic Knowledge. *Proceedings of IEEE Visual Analytics Science and Technology* (pp. 51 – 58, 2006), Baltimore, Maryland.
  49. **David Gotz** and Ketan Mayer-Patel. A Framework for Scalable Delivery of Digitized Spaces. *International Journal on Digital Libraries* (Volume 5, Number 3, pp. 205 – 218, 2005).
  50. **David Gotz** and Ketan Mayer-Patel. A General Framework for Multidimensional Adaptation. *Proceedings of ACM Multimedia* (pp. 612 – 619, 2004), New York City, New York.
  51. **David Gotz**, Ketan Mayer-Patel, and Dinesh Manocha. IRW: An Incremental Representation for Image-Based Walkthroughs. *Proceedings of ACM Multimedia* (pp. 67-76, 2002), Juan-les-Pins, France.
  52. Ruigang Yang, **David Gotz**, Justin Hensley, Herman Towles, and Michael S. Brown. PixelFlex: A Reconfigurable Multi-Projector Display System. *Proceedings of IEEE Visualization* (pp. 167 – 174, 2001), San Diego, California.
  53. Barbara Rothbaum, Larry Hodges, Renato Alacron, David Ready, Fran Shahar, Ken Graap, Jarrell Pair, Philip Hebert, **David Gotz**, Brian Wills, and David Baltzell. Virtual Reality Exposure Therapy for PTSD Vietnam Veterans: A Case Study. *Journal of Traumatic Stress* (Volume 12, Issue 2, pp. 263 – 271, 1999).

54. Larry Hodges, Barbara Rothbaum, Renato Alacron, David Ready, Fran Shahar, Ken Graap, Jarrell Pair, Philip Hebert, **David Gotz**, Brian Wills, and David Baltzell. A Virtual Environment for the Treatment of Chronic Combat-Related Post-Traumatic Stress Disorder. *CyberPsychology & Behavior (Volume 2, Number 1, pp. 7 – 14, 1999)*.
55. Larry Hodges, Barbara Rothbaum, Renato Alacron, David Ready, Fran Shahar, Ken Graap, Jarrell Pair, Philip Hebert, **David Gotz**, Brian Wills, and David Baltzell. Virtual Vietnam: A Virtual Environment for the Treatment of Vietnam Veterans with Post-Traumatic Stress Disorder. *Proceedings of the International Conference on Artificial Reality & Tele-Existence (pp. 1 – 6, 1998)*. Tokyo, Japan.

#### PEER REVIEWED WORKSHOP PAPERS & OTHER PEER REVIEWED MANUSCRIPTS

56. Arlene E. Chung, Kimberly Glass, Jacob Leisey-Bartsch, Lucas Mentch, Nils Gehlenborg, **David Gotz**. Precision VISSTA: Bring-Your-Own-Device (BYOD) mHealth Data for Precision Health. *Abstract and Oral Presentation at AMIA Annual Symposium (2019)*.
57. Tim Coleman, Lucas Mentch, Kimberly Glass, **David Gotz**, Nils Gehlenborg, Arlene E. Chung. Precision VISSTA: Machine Learning Prediction and Inference for Bring-Your-Own-Device (BYOD) mHealth Data. *Abstract and Oral Presentation at AMIA Annual Symposium (2019)*.
58. Jonathan Zhang, David Borland, Wenyuan Wang, Joshua Shrestha, **David Gotz**. Dynamic Hierarchical Aggregation, Selection Bias Tracking, and Detailed Subset Comparison for High-Dimensional Event Sequence Data. *Visual Analytics in Healthcare Workshop (VAHC) Posters, Vancouver, Canada (2019)*.
59. Wanchen Zhao, David Borland, Arlene E. Chung, **David Gotz**. Visual Cohort Queries for High-Dimensional Data: A Design Study. *Visual Analytics in Healthcare Workshop (VAHC)*, San Francisco, CA (2018).
60. Yufei Zhang, David Borland, **David Gotz**. Increasing Understanding of Survey Re-Weighting with Visualization. *IEEE VIS Posters*, Berlin, Germany (2018).
61. David Borland and **David Gotz**. Dual View: Multivariate Visualization Using Linked Layouts of Objects and Dimensions. *IEEE VIS Posters*, Berlin, Germany (2018).
62. Hung-Jui Tan, Arlene Chung, **David Gotz**, Angela Smith, Eric Wallen, Raj Pruthi, and Matt Nielsen. MP02-08 Disparate Access to Electronic Health Records and Quality Reporting Among US Urologists. *The Journal of Urology* (Volume 199, Issue 4, 2018).<sup>2</sup>
63. Arlene E. Chung, **David Gotz**, Bryce B. Reeve, and Ethan M. Basch. Clinician Perspectives on Barriers and Facilitators for Implementing Patient-Generated Health Data into Clinical Care. *Abstract and Oral Presentation at AcademyHealth Science of Dissemination and Implementation Conference (2017)*, Arlington, Virginia.
64. **David Gotz** and Rashnil Chaturvedi. Interactive Temporal Feature Construction: A User-Driven Approach to Predictive Model Development. *IEEE VIS Posters (2017)*, Phoenix, Arizona.
65. **David Gotz**, David Borland, Jesus Caban, Dawn Dowding, Brian Fisher, Vadim Kagan, and Danny T.Y. Wu. Evaluating Visual Analytics for Health Informatics Applications: A Progress Report from the AMIA VIS Working Group Task Force on Evaluation. *Visual Analytics in Healthcare Workshop (2016)*, Chicago, Illinois.

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<sup>2</sup> This article was published in the Journal of Urology along with other abstracts from AUA 2018.

66. Shunan Guo, Chaoguang Lin, **David Gotz**, Bo Jin, Hongyuan Zha, Linhua Shu and Nan Cao. Understanding Care Plans of Community Acquired Pneumonia Based on Sankey Diagram. *Visual Analytics in Healthcare Workshop (2016)*, Chicago, Illinois.
67. **David Gotz**. Soft Patterns: Moving Beyond Explicit Sequential Patterns During Visual Analysis of Longitudinal Event Datasets. *Proceedings of the IEEE VIS 2016 Workshop on Temporal & Sequential Event Analysis (2016)*, Baltimore, Maryland.
68. **David Gotz** and Shun Sun. Visual Assessment of Cohort Divergence During Iterative Cohort Selection. *Proceedings of Visual Analytics in Healthcare Workshop (VAHC) (2015)*, Chicago, Illinois.
69. **David Gotz** and Jimeng Sun. Visualizing Accuracy to Improve Predictive Model Performance. *Proceedings of IEEE VIS Workshop on Visualization for Predictive Analytics (2014)*, Paris, France.
70. Grace Shin, Samuel McLean, June Hu, and **David Gotz**. Visualizing Temporal Patterns by Clustering Patients. *Proceedings of Visual Analytics in Healthcare Workshop (VAHC) (2014)*, Washington, DC.
71. Steven Steinhubl, Jimeng Sun, Rajakrishnan Vijayakrishnan, Roy Byrd, Zahra Daar, **David Gotz**, Shahram Ebadollahi, Walter Stewart. The Signs and Symptoms of Heart Failure are Frequently Documented to Wax and Wane in the Years Prior to a Clinical Diagnosis of Heart Failure: Data from 4,644 Patients Followed in Primary Care. *Clinical Medicine and Research (Volume 11, Issue 3, pp. 134 – 135, 2013)*.<sup>3</sup>
72. **David Gotz**, Nan Cao, Esther Goldbraich and Boaz Carmeli. GapFlow: Visualizing Gaps in Care for Medical Treatment Plans. *IEEE VIS Poster (2013)*, Atlanta, Georgia.
73. Adam Perer and **David Gotz**. Visualizations to Support Patient-Clinician Communication of Care Plans. *Proceedings of ACM CHI Workshop on Patient-Clinician Communication (2013)*, Paris, France.
74. Adam Perer and **David Gotz**. Data-Driven Exploration of Care Plans for Patients. *ACM CHI Extended Abstracts (2013)*, Paris, France.
75. Zhiyuan Zhang, **David Gotz** and Adam Perer. Interactive Visual Patient Cohort Analysis. *Proceedings of Visual Analytics in Healthcare Workshop (2012)*, Seattle, Washington.
76. Nan Cao, **David Gotz**, Jimeng Sun, Yu-Ru Lin, and Huamin Qu. ChronAtlas: A Visualization for Dynamic Topic Exploration. *IEEE Information Visualization Posters (2011)*, Providence, Rhode Island.
77. Krist Wongsuphasawat and **David Gotz**. Outflow: Visualizing Patient Flow by Symptoms and Outcome. *Proceedings of Visual Analytics in Healthcare Workshop (VAHC) (2011)*, Providence, Rhode Island.
78. Jimeng Sun, **David Gotz**, and Nan Cao. A Visualization Tool for Navigation of Online Disease Literature. *American Medical Informatics Association Annual Symposium (AMIA) Posters (2010)*, Washington, DC.
79. **David Gotz**, Zhen Wen, Jie Lu, Peter Kissa, Nan Cao, Wei Hong Qian, Shi Xia Liu and Michelle X. Zhou. HARVEST: An Intelligent Visual Analytic Tool for the Masses. *Proceedings of the*

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<sup>3</sup> This article was published in the Clinical Medicine and Research journal as a “Selected Abstract” from HMO Research Network 2013.



- First International Workshop on Intelligent Visual Interfaces for Text Analysis (2010)*, Hong Kong, China.
80. Yedendra Shrinivasan and **David Gotz**. Connecting the Dots with Related Notes. *ACM CHI Extended Abstracts (2009)*, Boston, Massachusetts.
  81. Wen-Huang Cheng and **David Gotz**. Context-Based Page Unit Recommendation for Web-Based Sensemaking Tasks. *International World Wide Web Conference Poster (2008)*, Beijing, China.
  82. **David Gotz**, Zhen Wen, Jie Lu, Peter Kissa, Michelle X. Zhou, and Nan Cao, Wei Hong Qian, Shi Xia Lui. HARVEST – Visualization and Analysis for the Masses. *IEEE Information Visualization Poster (2008)*, Columbus, Ohio.
  83. **David Gotz**. The ScratchPad: Sensemaking Support for the Web. *International World Wide Web Conference Poster (2007)*, Banff, Canada.
  84. **David Gotz**, Michelle X. Zhou and Zhen Wen. A Study of Information Gathering and Result Processing in Intelligence Analysis. *Proceedings of Workshop on Intelligent User Interfaces for Intelligence Analysis (2006)*. Sydney, Australia.
  85. **David Gotz**. Supporting Adaptive Remote Access to Multiresolutional or Hierarchical Data for Large User Groups. *ACM Multimedia Doctoral Symposium (2004)*. New York City, New York.
  86. Jarrell Pair, Carlos Jensen, Jeff Wilson, Larry Hodges, **David Gotz**, and Julian Flores. The NAVE: Design and Implementation of a Non-Expensive Immersive Virtual Environment. *ACM SIGGRAPH Sketches and Applications (2000)*, New Orleans, Louisiana.

#### EDITED MANUSCRIPTS AND BOOK CHAPTERS

87. Nan Cao, Steffen Koch, **David Gotz**, Yingcai Wu (Guest Eds.). ACM TIST Special Issue on Visual Analytics. *ACM Transactions on Intelligent Systems and Technologies (TIST) (Volume 10, Issue 1, 2019)*.
88. Yingcai Wu, Nan Cao, **David Gotz**, and Steffen Koch. Visual Analytics: Towards Human Machine Intelligence. *NII Shonan Meeting Report No. 2018-120 (2018)*.
89. Nan Cao, Yingcai Wu, **David Gotz**, Daniel Keim, Yap-Peng Tan (Guest Eds.). Special Issue on Visualization and Visual Analytics for Multimedia. *IEEE Transactions on Multimedia (Volume 18, Issue 11, 2017)*.
90. **David Gotz** and Filip Dabek (Eds.). Proceedings of the 8th Visual Analytics in Healthcare Workshop. (2017).
91. Jesus Caban and **David Gotz** (Guest Eds). Special Issue on Visualization. *Journal of the American Medical Informatics Association (JAMIA)* (Volume 22, Issue 2, 2015).
92. **David Gotz**, Jesus Caban, and Annie T. Chen. Visual Analytics for Healthcare. *Healthcare Data Analytics (Chapman and Hall/CRC Press, 2015)*. ISBN 9781482232110.
93. **David Gotz** and Jesus Caban (Eds.). Proceedings of the 5th Visual Analytics in Healthcare Workshop. (2014).
94. **David Gotz** and Jesus Caban (Eds.). Proceedings of the 4th Visual Analytics in Healthcare Workshop. (2013).

95. George Bebis, Richard Boyle, Bahram Parvin, Darko Koracin, Baoxin Li, Fatih Porikli, Victor B. Zordan, James T. Klosowski, Sabine Coquillart, Xun Luo, Min Chen, and **David Gotz** (Eds.). Advances in Visual Computing – Proceedings of the 9th International Symposium on Visual Computing, Part I. Lecture Notes in Computer Science (Volume 8033, 2013).
96. George Bebis, Richard Boyle, Bahram Parvin, Darko Koracin, Baoxin Li, Fatih Porikli, Victor B. Zordan, James T. Klosowski, Sabine Coquillart, Xun Luo, Min Chen, and **David Gotz** (Eds.). Advances in Visual Computing – Proceedings of the 9th International Symposium on Visual Computing, Part II. Lecture Notes in Computer Science (Volume 8034, 2013).
97. **David Gotz** and Jesus Caban (Eds.). Proceedings of the 3rd Visual Analytics in Healthcare Workshop. (2012).
98. **David Gotz** and Jesus Caban (Eds.). Proceedings of the 2nd Visual Analytics in Healthcare Workshop. (2011).
99. **David Gotz** and Jimeng Sun (Eds.). Proceedings of the 1st Visual Analytics in Healthcare Workshop. (2010).

#### NON-REFEREED WORKS

100. **David Gotz** and David Borland. Data-Driven Healthcare: Challenges and Opportunities for Interactive Visualization. IEEE Computing Edge (January 2017).
101. Manish Kumar and **David Gotz**. System Design Barriers to HIS Data Use in Low and Middle-income Countries: A Literature Review. UNC School of Information and Library Science Technical Report 2016-01 (2016).
102. Rachael Hageman Blair, Brian Chapman, Arianna Di Florio, Ellen Eischen, **David Gotz**, Mathews Jacob, Han Yu. Flexible bootstrapping and analytic approaches towards the clustering of complex medical data. NIH Big Data to Knowledge All Hands Meeting Posters (2016).
103. Brian Chapman, Arianna Di Florio, Ellen Eischen, **David Gotz**, Rachael Hageman, Mathews Jacob. Interactive Ensemble clustering for mixed data with application to mood disorders. NIH Big Data to Knowledge All Hands Meeting Posters (2015).
104. Anne-Marie Meyer and **David Gotz**. A New Privacy Debate. Science. (April 10, 2015, Volume 348, Number 6231).
105. Jesus Caban and **David Gotz**. 2011 Workshop on Visual Analytics in Healthcare: Understanding the Physician Perspective. SIGHIT Record (Volume 2, Number 1, 2012).
106. **David Gotz**. Dynamic Voronoi Treemaps: A Visualization Technique for Time-Varying Hierarchical Data. IBM Research Technical Report RC25132 (2011).
107. **David Gotz** and Jimeng Sun. IEEE VisWeek Workshop on Visual Analytics in Health Care 2010. SIGHIT Record (Volume 1, Number 1, 2011).
108. **David Gotz** and Michelle X. Zhou. An Empirical Study of User Interaction Behavior During Visual Analysis. IBM Research Technical Report RC24525 (2008).
109. **David Gotz**. Channel Set Adaptation: Scalable and Adaptive Streaming for Non-Linear Media. *University of North Carolina at Chapel Hill Department of Computer Science Ph.D. Dissertation (2005).*

110. **David Gotz** and Ketan Mayer-Patel. GAL: A Middleware Library for Multidimensional Adaptation. *University of North Carolina at Chapel Hill Department of Computer Science Technical Report TR05-023* (2005).
111. **David Gotz** and Ketan Mayer-Patel. Scalable and Adaptive Streaming for Non-Linear Media. *University of North Carolina at Chapel Hill Department of Computer Science Technical Report TR05-022* (2005).
112. Brian Begnoche, **David Gotz** and Ketan Mayer-Patel. The Design and Implementation of StrandCast. *University of North Carolina at Chapel Hill Department of Computer Science Technical Report TR05-004* (2005).
113. **David Gotz**. The Design and Implementation of PixelFlex: A Reconfigurable Multi-Projector Display System. *University of North Carolina at Chapel Hill Department of Computer Science Technical Report TR01-025* (2001).
114. **David Gotz**. Design Considerations for a Multi-Projector Display Rendering Cluster. *University of North Carolina Department of Computer Science Integrative Paper* (2001).

## **PATENTS GRANTED**

This list enumerates patent applications which have been officially granted. It does not include any patent applications currently under review.

1. Identifying group and individual-level risk factors via risk-driven patient stratification  
*US 9,996,889*  
*Granted June 12, 2018*
2. Multi-faceted visualization of rich text corpora  
*US 9,390,194*  
*Granted July 12, 2016*
3. Visual analysis of multidimensional clusters  
*US 9,342,579*  
*Granted May 17, 2016*
4. Context-based document unit recommendation for sensemaking tasks  
*US 9183281*  
*Granted November 10, 2015*
5. Iterative refinement of cohorts using visual exploration and data analytics  
*US 9171104*  
*Granted October 27, 2015*
6. Methods for organizing information accessed through a web browser  
*US 9158854*  
*Granted October 13, 2015*
7. Iterative refinement of cohorts using visual exploration and data analytics  
*US 9104786*  
*Granted August 11, 2015*

8. Generating animated Voronoi treemaps to visualize dynamic hierarchical data with node insertion  
US 8952964  
Granted February 10, 2015
9. Interactive visualization of temporal event data and correlated outcomes  
US 8849823  
Granted September 30, 2014
10. Techniques for organizing information accessed through a web browser  
US 8589811  
Granted November 19, 2013
11. Methods for organizing information accessed through a web browser  
US 8205166  
Granted June 18, 2012

## TEACHING AND ADVISING

### TEACHING AND ENROLLMENT

2019	<b>Fall</b>	INLS 994, Doctoral Thesis (2 Students) COMP 991, Reading and Research (1 Student) COMP 992, Master's Research (2 Students)
	<b>Spring</b>	INLS 560, Programming for Information Professionals (15 students) INLS 560, Programming for Information Professionals ONLINE (11 students) INLS 992, Master's Paper (4 Students) INLS 994, Doctoral Thesis (1 Student) COMP 991, Reading and Research (1 Student)
2018	<b>Fall</b>	INLS 560, Programming for Information Professionals ONLINE (13 students) INLS 641, Visual Analytics (21 Students) INLS 992, Master's Paper (1 Student) INLS 994, Doctoral Thesis (1 Student)
	<b>Spring</b>	INLS 560, Programming for Information Professionals (30 students) INLS 560, Programming for Information Professionals ONLINE (16 students) INLS 692, Undergraduate Honors Thesis (1 Student) INLS 992, Master's Paper (4 Students)
2017	<b>Fall</b>	INLS 582, Systems Analysis (24 Students) INLS 641, Visual Analytics (23 Students) INLS 992, Master's Paper (1 Student)
	<b>Spring</b>	INLS 560, Programming for Information Professionals (26 Students) INLS 582, Systems Analysis (27 Students) INLS 696, Independent Study (1 Student) INLS 886, Teaching Practicum (1 Student) INLS 992, Master's Paper (1 Student)
2016	<b>Fall</b>	INLS 582, Systems Analysis (29 Students) INLS 690-224, Visual Analytics (21 Students) INLS 696, Independent Study (2 Students) INLS 992, Master's Paper (2 Students)

- Summer** INLS 992, Master's Paper (1 Student)
- Spring** INLS 560, Programming for Information Professionals (28 Students)  
INLS 582, Systems Analysis (20 Students)  
INLS 696, Independent Study (1 Student)  
INLS 992, Master's Paper (4 Students)
- 2015 **Fall** INLS 582, Systems Analysis (20 students)  
INLS 690, Visual Analytics (21 students)  
INLS 992, Master's Paper (2 student)
- Summer** INLS 696, Independent Study (1 student)
- Spring** INLS 394, Independent Study (1 student)  
INLS 560, Programming for Information Professionals (16 students)  
INLS 582, Systems Analysis (24 students)  
INLS 992, Master's Paper (1 student)
- 2014 **Fall** INLS 582, Systems Analysis (13 students)  
INLS 690, Visual Analytics (17 students)
- Spring** INLS 582, Systems Analysis (23 students)
- 2004 **Summer** COMP 14, Introduction to Programming (enrollment unknown)

#### PhD COMMITTEES

- 2018— **Amy Ising**, University of North Carolina at Chapel Hill, CHIP  
*Advisor: Leah Frerichs*  
*In progress*
- 2018— **Vincent N. Carrasco**, University of North Carolina at Chapel Hill, CHIP  
*Advisor: Javed Mostafa*  
*In progress*
- 2018— **Manish Kumar**, University of North Carolina at Chapel Hill, CHIP  
*Thesis Advisor: Javed Mostafa*  
*In progress*
- 2018— **Michael Ortiz**, University of North Carolina at Chapel Hill, CHIP  
*Thesis Advisor: Javed Mostafa*  
*In progress*
- 2018— **Gal Levy-Fix**, Columbia University, Biomedical Informatics  
*Thesis Advisor: Noemie Elhadad*  
*In progress*
- 2017— **Megan Threats**, University of North Carolina at Chapel Hill, Information Science  
*Thesis Advisor: Amelia Gibson*  
*In progress*
- 2016— **Anita Crescenzi**, University of North Carolina at Chapel Hill, Information Science  
*Thesis Advisor: Rob Capra*  
*In progress*

- 2015—2018 **Adam Sage**, University of North Carolina at Chapel Hill, Pharmacy  
*Thesis Advisor: Delesha Carpenter*  
*Graduated in May 2018, Accepted position at Facebook*
- 2015—2018 **Natalie Stanley**, University of North Carolina at Chapel Hill, Math/Comp. Biology  
*Thesis Advisor: Peter Mucha*  
*Graduated in May 2018, Accepted position at Stanford*
- 2014—2017 **Chanin Tolson**, University of North Carolina at Chapel Hill, Bioinformatics  
*Thesis Advisor: Alain Laederbach*  
*Graduated May 2017, Accepted position at Apple*
- 2016 **Yi Han**, Georgia Institute of Technology, Computer Science  
*Thesis Advisor: Gregory Abowd and John Stasko*  
*Graduated December 2016, Accepted position at Delta Electronics*
- 2012 **Krist Wongsuphasawat**, University of Maryland, Computer Science  
*Thesis Advisor: Ben Shneiderman*  
*Thesis Title: Interactive Exploration of Temporal Event Sequences*  
*Graduated June 2012, Accepted position at Twitter*
- 2010 **Yedendra Shrinivasan**, Technische Universiteit Eindhoven, Computer Science  
*Thesis Advisor: Jack van Wijk*  
*Thesis Title: Supporting the Sensemaking Process in Visual Analytics*  
*Graduated June 2010, Accepted position at IBM Research India*

#### RESEARCH MENTORSHIP AND SUPERVISION

- 2019— **Smiti Kaur** (*Graduate Research Assistant*)  
*PhD Student in Computer Science at the University of North Carolina at Chapel Hill*
- 2019— **Zhilan Zhou** (*Graduate Research Assistant*)  
*PhD Student in Computer Science at the University of North Carolina at Chapel Hill*
- 2019— **Tasnia Sarwar** (*Undergraduate Research Assistant*)  
*Undergraduate in Computer Science at the University of North Carolina at Chapel Hill*
- 2018— **Bryce Morrow** (*Graduate Research Assistant*)  
*MS Student in Computer Science at the University of North Carolina at Chapel Hill*
- 2018— **Jonathan Zhang** (*Graduate Research Assistant*)  
*PhD Student in Biostatistics at the University of North Carolina at Chapel Hill*
- 2018—2019 **Joshua Shrestha** (*Undergraduate Research Assistant*)  
*Undergraduate in Computer Science at the University of North Carolina at Chapel Hill*
- 2017— **Alex Rich** (*Advised PhD Student*)  
*PhD Student in Biomedical and Health Informatics at Univ. of N. Carolina at Chapel Hill*
- 2017— **Wenyuan Wang** (*Advised PhD Student*)  
*PhD Student in Information Science at the University of North Carolina at Chapel Hill*
- 2017—2018 **Yufei Zhang** (*Graduate Research Assistant*)  
*MS Student in Information Science at the University of North Carolina at Chapel Hill*

- 2016— **Charlene Finley** (*Co-Advised PhD Student*)  
*PhD Student in Information Science at the University of North Carolina at Chapel Hill*
- 2015—2016 **Shun Sun** (Graduate Research Assistant)  
*MS Student in Information Science at the University of North Carolina at Chapel Hill*
- 2014—2016 **Arlene Chung, MD, MHA** (KL2 Mentored Career Development Award Recipient)  
*Assistant Professor of Medicine and Pediatrics at Univ. of North Carolina at Chapel Hill*
- 2014—2015 **Annie Chen** (Graduate Research Assistant)  
*PhD Student in Information Science at the University of North Carolina at Chapel Hill*
- 2013 **Chad Stopler** (Research Intern at IBM Research)  
*PhD Student in Computer Science at the Georgia Institute of Technology*
- 2012 **Zhiyuan Zhang** (Research Intern at IBM Research)  
*PhD Student in Computer Science at Stony Brook University*
- 2011 **Krist Wongsuphasawat** (Research Intern at IBM Research)  
*PhD Student at the University of Maryland*
- 2010 **Nan Cao** (Research Intern at IBM Research)  
*PhD Student in Computer Science at Hong Kong University of Science and Technology*
- 2008 **Yedendra Shrinivasan** (Research Intern at IBM Research)  
*PhD Student in Computer Science at Technische Universiteit Eindhoven*
- 2007 **Wen-Huang Cheng** (Research Intern at IBM Research)  
*PhD Student in Computer Science at National Taiwan University*

#### MASTER'S PAPER / PROJECT SUPERVISION

- 2019 **Carmen Dolling**  
*Visualizing U.S. Animal Shelter Outcomes*
- Elizabeth Roknich**  
*Visual Techniques for Stormwater Management: Creation and Usability Study of a Stormwater Fee Dashboard*
- Mengnan (Nick) Wang**  
*Design and Implement a New Remote Web-Based Visualization System for the Clinical Examination and Treatment of Skin Lesions*
- Lu Xu**  
*A visual analysis of EHR Flowsheet to help clinicians have a better understanding of health-related data*
- 2018 **Nidhi Shah**  
*Predictive Modelling to Identify Risk Factors Leading to Opioid Addiction*
- Chuting Liu**  
*A Visual Analysis to Help College Freshmen's Career Choosing – via Aspects of Education Level and Salary*
- Kehan Luo**  
*Machine Learning Approach for Genre Prediction on Spotify Top Ranking Songs*

- Nidhi Shah**  
*Predictive Modelling to Identify Risk Factors Leading to Opioid Addiction*
- Yufei Zhang**  
*Increasing the Transparency of Survey Re-Weighting Using Visualization*
- Wanchen Zhou**  
*Visual Query System to Help Users Refine Queries from High-Dimensional Data: A Case Study*
- 2017 **Rashnil Chaturvedi**  
*Interactive Temporal Feature Construction: A User-Driven Approach to Predictive Model Development*
- Katherine Shaw**  
*Visualizing Women in Technology*
- 2016 **Jiaoling Chen**  
*A Study to Explore How Differences in the Amount of Details in Visualization Impact Decision-making*
- Nnenna Ibeanusi**  
*Understanding Geographic, Temporal, and Multidimensional Trends Using Visualization in Healthcare*
- Jyotsna Krishna Sastrula**  
*Analysis and Visualization Methods for Data-Driven Longitudinal Patient Summary*
- Rita Kundu**  
*Visual Analytics System Implementation in ICISS environment*
- Shun Sun**  
Evaluation of a Visual Analytical Tool Used to Help Reduce the Unconscious Selection Bias Generated During High-Dimensional Data Selection
- Zhenwei Wang**  
Developing and evaluating the internet of things system for room management on campus, a usability perspective
- Qiongcheng Xu**  
*Data Mining and Visualization on Live Chat Data for E-commerce Business*
- 2015 **Sreenivasula Reddy Gajjala**  
*Longitudinal Analysis of Readmission Risk Using Machine Learning*
- Olivia Dorsey**  
*Visual Analysis of Phases of Police Brutality Against Unarmed African Americans from 1979 to 2014*
- Caroline Simpson**  
*Nonprofit Use of Information Visualization*



## UNDERGRADUATE HONOR'S THESIS SUPERVISION

2018      **Sophie Niu**  
*Visualization Tool Use in Secondary Mathematics Classroom Education*

## GRANTS AND CONTRACTS

### ACTIVE GRANTS AND CONTRACTS

**NSF CISE**    *IUSE: Computing in Undergraduate Educ.*      *January 1, 2020 – June 30, 2021*  
Title: CUE: Collaborative Research: Effective Peer Teaching Across Computing Pathways  
Role: PI (*co-PI with Ketan Mayer-Patel, UNC CS; Coordinating PI is Sarah Heckman, NCSU*)  
Total Award Amount: \$299,127 (*\$47,015 to UNC*)

**NCSU**      *Laboratory for Analytic Sciences*      *January 1, 2020 – December 31, 2020*  
Title: Visual Data Exploration for Integrated Structured/Unstructured Analysis  
Role: PI (*co-PI with Yue Wang, UNC SILS*)  
Total Award Amount: \$213,595

**RTI**      *University Scholar Program*      *September 1, 2020 – August 31, 2020*  
Title: Scalable Visual Analytics for Semi-Structured Longitudinal Event Data  
Role: PI  
Total Award Amount: \$127,026

**NSF CISE**    *IIS REU Supplement*      *August 21, 2019 – August 20, 2020*  
Title: REU Supplement for Bias Tracking and Reduction Methods for High-Dimensional Exploratory  
Visual Analysis and Selection  
Role: PI  
Total Award Amount: \$16,000

**NSF CISE**    *IIS: Information Integration and Informatics*    *May 1, 2019 – April 30, 2020*  
Title: NSF Student Travel Support for the 2019 IEEE Visualization Doctoral Colloquium (IEEE VIS  
DC)  
Role: PI  
Total Award Amount: \$25,000

**NFS CISE**    *IIS Core Medium Program*      *July 1, 2017 – June 31, 2021*  
Title: Bias Tracking and Reduction Methods for High-Dimensional Exploratory Visual Analysis and  
Selection  
Role: PI  
Total Award Amount: \$1,081,598

**NIH R01**    *Efficient Statistical Learning Methods for Personalized Medicine Using Large Scale  
Biomedical Data*      *April 1, 2018 – March 21, 2022*  
Role: Co-Investigator  
Total Award Amount: \$1,575,556

**NIH R01**    *Quant. Approaches to Biomed. Big Data*      *September 30, 2017 – June 30, 2020*  
Title: QuBBD: Statistical & Visualization Methods for PGHD to Enable Precision Medicine  
Role: Co-Investigator  
Total Award Amount: \$940,152

**NIH T32**    *Big Data to Knowledge (BD2K) Training*      *May 1, 2015 – April 30, 2020*  
Role: Deputy Director  
Total Award Amount: \$316,018

**United Healthcare Foundation** Enable Training Program August 1, 2017 – July 31, 2020

Role: Co-Investigator

Total Award Amount: \$1,600,000

## **PRIOR FUNDING**

**NIH OTC** *NIH Data Commons* *September 30, 2017 – June 30, 2018*

Title: A Collaboration for the NIH Data Commons

Role: Co-Investigator

Total Award Amount: \$1,224,574

**NSF DMS** *QuBBD Program (Collaborative Research)* *September 11, 2015 – September 10, 2017*

Title: Interactive Ensemble clustering for mixed data with application to mood disorders

Role: PI

Total Award Amount: \$100,000 (*\$21,500 to UNC*)

**Amazon** *Amazon Web Services in Education Grant* *May 1, 2015 – April 30, 2017*

Title: Novel methods for visual analytics of electronic health data at scale

Role: PI

Total Award Amount: \$4,000

**NCDS** *Data Fellow Award* *January 1, 2015 – December 31, 2015*

Title: Visual analytics for large-scale temporal event data

Role: PI

Total Award Amount: \$50,000

*Prior to January 2014, David Gotz was employed by IBM Research and was funded via internal IBM resources.*

## **PROFESSIONAL SERVICE**

- 2019 Associate Editor, IEEE TVCG  
Best Dissertation Award Committee, IEEE VGTC  
Co-Chair, IEEE VIS Doctoral Colloquium  
Co-Chair, Workshop on Visual Analytics in Healthcare  
Program Committee, IEEE VAST  
Program Committee, EuroVA  
Program Committee, IEEE/ACM CHASE  
Steering Committee, Workshop on Visual Analytics in Healthcare  
Moderator, Visual Analytics in Healthcare Mailing List
- 2018 Steering Committee, Workshop on Visual Analytics in Healthcare  
Co-Chair NII Shonan Meeting on Visual Analytics: Towards Effective Human-Machine Intelligence  
Guest Editor, ACM TIST Special Issue on Visual Analytics  
Co-Chair, AMIA VIS WG Task Force on Visualization Evaluation  
Program Committee, IEEE/ACM Chase  
Program Committee, ACM Intelligent User Interfaces (IUI)  
Moderator, Visual Analytics in Healthcare Mailing List
- 2017 Co-Organizer, NII Shonan Meeting on Visual Analytics: Towards Effective Human-Machine Intelligence  
Paper Chair, Workshop on Visual Analytics in Healthcare  
Steering Committee, Workshop on Visual Analytics in Healthcare

- Co-Chair, AMIA Working Group on Visual Analytics (VIS WG)  
 Co-Chair, AMIA VIS WG Task Force on Visualization Evaluation  
 Moderator, Visual Analytics in Healthcare Mailing List  
 Senior Program Committee, ACM International Conference on Healthcare Informatics (ICHI)  
 Program Committee for ACM Intelligent User Interfaces (IUI)  
 Program Committee for IEEE VAST  
 Program Committee, IEEE CHASE
- 2016 Co-Chair, AMIA Working Group on Visual Analytics  
 Chair, AMIA Working Group on Visual Analytics Task Force on Visualization Evaluation  
 Program Committee, DAVA: 2<sup>nd</sup> International Workshop on Data Mining Meets Visual Analytics in the Big Data Era, at ACM CIKM  
 Co-Chair, IEEE VIS Workshop on Temporal and Sequential Event Analysis  
 Guest Editor, ACM Transactions on Multimedia  
 Moderator, Visual Analytics in Healthcare Mailing List  
 Steering Committee, Workshop on Visual Analytics in Healthcare  
 Program Committee, IEEE CHASE  
 Program Committee, IMCW  
 Program Committee for IEEE VAST  
 Program Committee for ACM Intelligent User Interfaces (IUI)  
 Program Committee for International Symposium on Visual Computing (ISVC)  
 Founder and Co-Chair, Triangle Visualization Group
- 2015 Founder, AMIA Working Group on Visual Analytics (founded in 2015)  
 Co-Chair, AMIA Working Group on Visual Analytics  
 Co-Chair, Exhibits for IEEE VIS  
 Guest Editor, Journal of the American Medical Informatics Association (JAMIA)  
 Guest Editor, ACM Transactions on Multimedia  
 Program Committee for IEEE VAST  
 Program Committee for ACM Intelligent User Interfaces (IUI)  
 Program Committee for International Symposium on Visual Computing  
 Senior Program Committee for ACM International Conference on Healthcare Informatics (ICHI)  
 Steering Committee, Workshop on Visual Analytics in Healthcare  
 Moderator, Visual Analytics in Healthcare Mailing List  
 Tutorial Organizer, AMIA Annual Symposium Tutorial on Visual Analytics
- 2014 Co-Chair, Industry Outreach for IEEE VIS  
 Co-Chair, AMIA Workshop on Visual Analytics in Health Care  
 Co-Chair, CIKM Workshop on Interactive Mining for Big Data  
 Guest Editor, Journal of the American Medical Informatics Association (JAMIA)  
 Program Committee for the International Conference on Information Visualization Theory and Applications  
 Program Committee for IEEE International Conference on Health Informatics (ICHI)  
 Program Committee for International Symposium on Visual Computing  
 Moderator, Visual Analytics in Healthcare Mailing List
- 2013 Co-Chair, International Symposium on Visual Computing  
 Co-Chair, AMIA Workshop on Visual Analytics in Health Care  
 Co-Chair, SIAM International Conference on Data Mining (SDM) Workshop on Data Mining for Medicine and Healthcare  
 Co-Chair, Industry Outreach for IEEE VIS  
 Program Committee for the International Conference on Information Visualization Theory and Applications  
 Program Committee for the International Workshop on User-Adaptive Visualization

Program Committee for the KDD 2013 Workshop on Interactive Data Exploration and Analytics

- 2012 Co-Chair, Financial Support for ACM SIGHT International Health Informatics Symposium  
Co-Chair, IEEE VisWeek Workshop on Visual Analytics in Health Care  
Program Committee for the International Conference on Information Visualization Theory and Applications  
Program Committee for the International Symposium on Visual Computing  
DIMACS Medical Informatics Advisory Board
- 2011 Co-Chair, Tutorial Program for IEEE VisWeek  
Co-Chair, IEEE VisWeek Workshop on Visual Analytics in Health Care  
Co-Chair, ACM KDD Workshop on Visual Analytics and Information Fusion  
Track Co-Chair, International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE EMBC)  
Program Committee for the International Conference on Information Visualization Theory and Applications  
Program Committee for the International Symposium on Visual Computing
- 2010 Co-Chair, IEEE VisWeek Workshop on Visual Analytics in Health Care  
Co-Chair, Tutorial Program for IEEE VisWeek  
Program Committee for ACM Multimedia  
Program Committee for the International Conference on Information Visualization Theory and Applications  
Program Committee for the International Symposium on Visual Computing
- 2009 Program Committee for IEEE VAST  
Program Committee for ACM Multimedia  
Program Committee for the International Symposium on Visual Computing
- 2008 Co-Chair, Poster Program for IEEE VAST  
Program Committee for ACM Multimedia  
Program Committee for the International Symposium on Visual Computing
- 2007 Co-Chair, Poster Program for IEEE VAST  
Program Committee for ACM Multimedia
- 2006 Program Committee for ACM Multimedia  
Best Short Paper Award Committee Member for ACM Multimedia Conference

*Reviewer for several journals, conferences, and agencies including but not limited to:*

ACM Conference on Conference on Human Information Interaction and Retrieval (CHIIR)  
ACM Conference on Human Factors in Computing Systems (CHI)  
ACM Intelligent User Interfaces (IUI)  
ACM Intelligent User Interfaces (IUI) Student Consortium  
ACM Multimedia  
ACM Transactions on Multimedia Computing, Communications and Applications  
ACM Transactions on Intelligent Systems and Technology  
ACM Transactions on Interactive Intelligent Systems  
Applied Clinical Informatics Journal (ACI)  
American Medical Informatics Association (AMIA) Annual Symposium  
Computer Graphics Forum  
EuroGraphics  
EuroVA  
EuroVis

IBM Journal of Research and Development  
 IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering  
 Technologies  
 IEEE Computer Graphics and Applications (CG&A)  
 IEEE Information Visualization (InfoVis)  
 IEEE International Conference on Health Informatics  
 IEEE International Conference of Pervasive Computing and Communications  
 IEEE MultiMedia Magazine  
 IEEE Transactions on Circuits and Systems for Video Technology  
 IEEE Transactions on Multimedia  
 IEEE Transactions on Visualization and Computer Graphics  
 IEEE Visual Analytics Science and Technology (VAST)  
 International Symposium on Visual Computing  
 International Conference on Information Visualization Theory and Applications  
 Journal of the American Medical Informatics Association (JAMIA)  
 National Science Foundation  
 Visual Analytics in Healthcare (VAHC) Workshop

## **SERVICE TO THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL**

- 2019* Chair, Project Fair Organizing Committee, School of Information and Library Science  
 Data Science Subcommittee on Research, University of North Carolina  
 Lead, Applied Data Science Certificate Team, School of Information and Library Science  
 Research and Doctoral Committee, School of Information and Library Science  
 PhD Admissions Committee, Carolina Health Informatics Program  
 MS Admissions Committee, Carolina Health Informatics Program  
 CIPHR Steering Committee, UNC Lineberger Comprehensive Cancer Center  
 SILS Representative, Data Science PSM Committee, University of North Carolina
- 2018* Chair, Faculty Salary Committee, School of Information and Library Science  
 Chair, Project Fair Organizing Committee, School of Information and Library Science Faculty  
 Faculty Search Committee: Human-Centered Data Science, School of Information and  
 Library Science  
 Research and Doctoral Committee, School of Information and Library Science  
 PhD Admissions Committee, Carolina Health Informatics Program  
 MS Admissions Committee, Carolina Health Informatics Program  
 CIPHR Steering Committee, UNC Lineberger Comprehensive Cancer Center  
 SPH BIOS Data Science Curriculum Committee, School of Public Health, Dept. of  
 Biostatistics  
 SILS Representative, Data Science PSM Committee, University of North Carolina  
 Associate Director, NIH BD2K T32 Training Program
- 2017* Campaign Faculty Ambassador, University of North Carolina  
 SILS Representative, Data Science PSM Committee, University of North Carolina  
 Faculty Search Committee, School of Information and Library Science  
 Organizer, 3<sup>rd</sup> Annual SILS Project Fair, School of Information and Library Science  
 Chair, Research and Doctoral Committee, School of Information and Library Science  
 Faculty Salary Committee, School of Information and Library Science  
 PSM Admissions Committee, Carolina Health Informatics Program  
 Curriculum Committee, Carolina Health Informatics Program  
 Associate Director, NIH BD2K T32 Training Program
- 2016* Organizer, 2<sup>nd</sup> Annual SILS Project Fair, School of Information and Library Science  
 Chair, Research and Doctoral Committee, School of Information and Library Science  
 Undergraduate Committee, School of Information and Library Science

Faculty Salary Committee, School of Information and Library Science  
Admissions Committee, Professional Science Masters, Carolina Health Informatics Program  
Curriculum Committee, Carolina Health Informatics Program  
Associate Director, NIH BD2K T32 Training Program

*2015* Organizer, 1<sup>st</sup> Annual SILS Project Fair, School of Information and Library Science  
Staff Excellence Award Committee, School of Information and Library Science  
Undergraduate Committee, School of Information and Library Science  
Faculty Search Committee, School of Information and Library Science  
Faculty Salary Committee, School of Information and Library Science  
Admissions Committee, Professional Science Masters, Carolina Health Informatics Program  
Associate Director, NIH BD2K T32 Training Program  
Search Committee, Health Science Library Head of Health Information Technology  
Initiatives

*2014* Personnel Committee, School of Information and Library Science  
Admissions Committee, Professional Science Masters, Carolina Health Informatics Program