TRAVIS MARTIN

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Education

University of Michigan · PhD Computer Science & Engineering   *2016*
3.90 GPA

Rice University · BS Computer Science, BA Mathematics   *2011*
3.70 GPA, 3.81 Major GPA

Skills

Expertise · ML model building/experimentation/evaluation, Machine learning, Android development, Network science, Graph algorithms, Bayesian inference, Game theory, Topic modeling.

Programming Languages · Java, Python, C, C++, C#, MapReduce, Dart, Javascript, Git, LaTeX.

Industry and Research Experience

Senior Software Engineer: Research & Machine Intelligence · Google Inc.   *2016–Present*
 – 1st engineer and initial prototyper for a smart text selection feature for Android Pie.
 – Helped guide this feature from prototype, to being announced at Google IO,[1] to being a shipped feature in Android P, with millions of active users. This successful launch led to our team expanding from 3 engineers to 20+ engineers.
 – Tech lead for smart selection models: designed and lead a team of 3 engineers in the building of models, verifying their quality, and shipping them to devices. Coordinated and planned with partner teams.

Graduate Researcher: Network Theory & Strategic Reasoning · U Michigan   *2011–2016*
 – Performed data analysis and visualization of an online dating dataset.
 – Designed and implemented a message passing inference algorithm for noisy networks.
 – Created and evaluated a new spectral graph centrality measure, tested with graph and matrix calculations.
 – Derived novel insights from academic coauthorship-citation network.
 – Solved for the behavior of a model governing small-world-like disease spreading and tested the model.
 – Calculated the impact of agent behavior on product adoption.

Python Programmer · Freelance   *2014, 2016*
 – Coded an art project: withervanes.com. My Python code controlled a motorized weather vane which reacted to tweets and world news.

Research Intern, Computational Social Science · Microsoft Research   *Summer 2015*
 – Designed model predicting retweets on large (1.47B tweets) dataset.
 – Used Hadoop and Cosmos to compute features, perform topic modeling and train and test a random forest model for prediction.

Undergrad Researcher: Bioinformatics Group, Acumen Group · Rice University *2009–2011*

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[1] `https://www.youtube.com/watch?v=9Ac6leZIgJw&t=642`

Software Development Engineer in Test Intern · Microsoft   *Summer 2010*
  – Wrote C# scripts used by all Outlook testers to check validity of their automation.

Risk Analyst · VCS Capital Management   *2009–2010*

Rice Solar Decathlon Engineering Group · Rice University   *2009–2010*

Web Designer, Tutor · Ethos Prep, LLC   *2007–2009*

Software Engineering Intern · EControls Incorporated   *Summers 2006–2008*

Teaching Experience

Private Computer Science Tutor · Freelance   *2013–2015*

Graduate Student Instructor · University of Michigan   *Fall 2011; Winter 2012*
  – Instructor for: Discrete Mathematics and Foundations of Computing.
  – Planned and taught weekly discussion sessions.
  – Taught two lectures.
  – Managed and organized a team of graders.
  – Won CSE Graduate Student Instructor Award.

Course Creator and Instructor: Intro to Information Theory · Rice University   *Spring 2011*

Teaching Assistant · Rice University   *2009*
  – Lead lab session and held office hours for Principles of Program Design and
    Mathematics of Computation

Honors

UM CSE Honors Competition Finalist (2013)

STIET Fellowship (2012–2013)

CSE Graduate Student Instructor Award (2012)

Rice University Comp. Sci. Club and CSters Schlumberger Scholarship Recipient (2009)

Martin Marietta Materials Scholarship Recipient (2007–2011)

Eagle Scout, Boy Scouts of America (2006)

Publications

Exploring limits to prediction in complex social systems: Predicting cascade size on Twitter, Travis Martin, Jake M. Hofman, Amit Sharma, Ashton Anderson, Duncan J. Watts, World Wide Web (2016)

Structural inference for uncertain networks, Travis Martin, Brian Ball, M. E. J. Newman, Phys. Rev. E (2015)

Identification of core-periphery structure in networks, Xiao Zhang, Travis Martin, M. E. J. Newman, Phys. Rev. E, 91, 032803 (2015)

Equitable random graphs, M. E. J. Newman, Travis Martin, Phys. Rev. E, 90, 052824 (2014)

Localization and centrality in complex networks, Travis Martin, Xiao Zhang, M. E. J. Newman, Phys. Rev. E, 90, 052808 (2014)

Characterizing strategic cascades on networks, Travis Martin, Grant Schoenebeck, Michael P. Wellman, Electronic Commerce (2014)

Coauthorship and citation in scientific publishing, Travis Martin, Brian Ball, Brian Karrer, M. E. J. Newman, Phys. Rev. E, 88, 012814 (2013)

The small-world effect is a modern phenomenon, Seth A. Marvel, Travis Martin, Charles R. Doering, David Lesseau, M. E. J. Newman, arXiv:1310.2636 (2013)