

Nikhil Garg

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EDUCATION

Stanford University, August 2015 - Present

Stanford, CA

PhD Candidate, Electrical Engineering, (Advisors: Ashish Goel & Ramesh Johari)

MS, Electrical Engineering, 2017

NSF Graduate Research Fellowship, 2015

University of Texas at Austin, May 2015

Austin, TX

BS, Electrical and Computer Engineering, Highest and Special Honors

BA, Plan II Honors (Liberal Arts)

Thesis: User Association in Dense Next-Generation Wireless Networks (Advisor: Jeff Andrews)

Project: ProjectAlexandria.net: Book Recommendation & Exploration Engine (Advisor: Constantine Caramanis)

INDUSTRY EXPERIENCE

Uber

Data Science Intern, Marketplace

San Francisco, CA

June 2018 - September 2018

Microsoft

Software Development Engineering Intern, Bing Ads

Bellevue, WA

May 2014 - August 2014

NASA Glenn Research Center

Research Associate, NASA Space Academy

Cleveland, OH

June 2013 - August 2013

RESEARCH EXPERIENCE

Implementable Algorithms for Social Choice

PhD Research Assistant under Prof. Ashish Goel

Stanford

September 2015 - Present

Designing Online Markets

PhD Research Assistant under Prof. Ramesh Johari

Stanford

June 2016 - Present

Wireless Networks and Communications Group

Research Assistant under Prof. Jeffrey Andrews

UT Austin

August 2014 - May 2015

Mobile and Pervasive Computing Group

Research Assistant under Prof. Christine Julien

UT Austin

January 2012 - May 2013

Autonomous Vehicles Lab, Learning Agents Research Group

Student - Freshmen Research Initiative

UT Austin

January 2012 - May 2012

POLICY EXPERIENCE

IEEE-USA Insight Magazine

Monthly Column Writer

August 2015 - December 2015

IEEE-USA, Washington Internship for Students of Engineering Program

Technology Policy Associate

Washington, DC

June 2015 - August 2015

Texas Senate

Legislative Intern, State Senator Davis's Legislative Office

Austin, TX

August 2013 - December 2013

Strauss Center for International Security and Law

UT Austin

TEACHING EXPERIENCE

Management Science & Engineering

Teaching Assistant, Small Data, Ramesh Johari

Stanford

September - December 2018

Graduate School of Business

Teaching Assistant, Data Science for Online Marketplaces, Ramesh Johari and Gabriel Weintraub

Stanford

May 2018

Department of Electrical & Computer Engineering

Teaching Assistant, Introduction to Computing, Yale Patt

UT Austin

August 2013 - December 2013

Department of Mathematics

Learning Assistant, Integral Calculus

UT Austin

January 2012 - May 2012

PROFESSIONAL & RESEARCH ACTIVITIES

Fellowships

- National Science Foundation Graduate Fellowship, 2015-2018
- Stanford McCoy Center for Ethics in Society Graduate Fellow, 2017-2018

Talks

- **07/18**, *Designing Informative Rating Systems: Evidence from two experiments*, Uber research seminar, San Francisco, CA
- **06/18**, *Designing Informative Rating Systems: Evidence from two experiments*, Market Design Workshop at EC'18 in Cornell, Ithaca, NY
- **04/18**, *Reputation, Trust, and Markets*, Stanford MS&E 190
- **04/18**, *Designing Rating Systems for Online Platforms*, Stanford SOAL seminar
- **10/17**, *Designing Rating Systems for Online Platforms*, INFORMS in Houston, Texas
- **06/17**, *Designing Reputation Systems for Online Platforms: Pairwise Comparisons*, the Marketplace Innovation Workshop in Stanford
- **04/17**, *Reputation, Trust, and Markets*, Stanford MS&E 190
- **04/17**, *Pairwise Comparisons for Online Reputation Systems*, Poster, Stanford Computer Forum
- **04/17**, *Collaborative Optimization for Collective Decision-making in Continuous Spaces*, WWW 2017 in Perth, Australia
- **12/15**, *Impact of Dual Slope Path Loss on User Association in HetNets*, Globecom Workshop on HetNets, in San Diego, CA

Reviewing

- PC Member, WWW 2018 Big Web Track
- Markets for Good's *Good Data Grant*, 2016

Organization

- Stanford Social Algorithms (SOAL) Seminar, 2017-2018
- Stanford Research on Algorithms, Incentives, and Networks (RAIN) Seminar, 2016-2017

- Stanford EE Admit Visit Day Committee, 2017
- UT Austin HKN Honor Society Student Chapter, 2013-2014
- UT Austin IEEE Computer Society Student Chapter, 2011-2013

Consulting

- **Jet Blue Technology Ventures**, *Machine Learning Due Diligence*
- **SNCF**, *Machine Learning/Digitalization*
- **DAS Worldwide | Wireless Everywhere**, *Wireless Engineering and Strategy*

PUBLICATIONS

Working Papers

2. NG and Ramesh Johari. 2018. Designing Optimal Binary Rating Systems. *In Submission*.
1. NG and Ramesh Johari. 2018. Designing Informative Rating Systems: Evidence from two experiments. *In Submission*.

Journal

2. NG, Vijay Kamble, Ashish Goel, David Marn, and Kamesh Munagala. 2017. Iterative Local Voting for Collective Decision-making in Continuous Spaces. In *Journal of Artificial Intelligence Research (JAIR)*.
1. NG, Londa Schiebinger, Dan Jurafsky, and James Zou. 2018. Word embeddings quantify 100 years of gender and ethnic stereotypes. *Proceedings of the National Academy of Sciences (PNAS)* (April 2018).

Conference

4. NG, Ashish Goel, and Ben Plaut. 2018. Markets for Public Decision-making. Web and Internet Economics (WINE '18)
3. NG, Vijay Kamble, Ashish Goel, David Marn, and Kamesh Munagala. 2017. Collaborative Optimization for Collective Decision-making in Continuous Spaces. In *International Conference on World Wide Web (WWW '17)*.
2. NG, Sarabjot Singh, and Jeffrey Andrews. 2015. Impact of Dual Slope Path Loss on User Association in HetNets. In *IEEE Globecom Workshops (GC Wkshps)*.
1. Beth Lewandowski, Kier Fortier, NG, Victor Rielly, Jeff Mackey, Tristan Hearn, Angela Harrivel, and Bradford Fenton. 2015. Use of electroencephalography and galvanic skin response in the prediction of an attentive cognitive state. In *Health and Human Performance Research Summit, Dayton, CO*.

Other

4. NG (2015). "Fair Use and Innovation in Unlicensed Wireless Spectrum: LTE unlicensed and Wi-Fi in the 5 GHz unlicensed band," *IEEE-USA, Journal of Technology and Public Policy*.
3. NG. "Comments of Nikhil Garg: A Doctrine of Fair Use of Unlicensed Bands." Federal Communications Commission ET Docket No. 15-105 (LTE Unlicensed Docket), 26 Jun. 2015.
2. NG (2015). "Downlink and Uplink User Association in Dense Next-Generation Wireless Networks," Bachelors Thesis, University of Texas at Austin, Austin, TX.
1. Kier Fortier, NG, and Elizabeth Pickering. (2013). "Multi-Modal, Multi-State, Real-Time Crew State Monitoring System," NASA Glenn Research Center, Space Academy Research Report.

RELEVANT COURSEWORK

Graduate Courses (Stanford)

Advanced Algorithms for Machine Learning, Reinforcement Learning, Deep Learning for Natural Language Processing, Statistical Learning Theory, Approximation Algorithms, Convex Optimization, Large Markets and Games, Statistical Signal Processing, Linear Dynamical Systems, Wireless Communications, Law Order & Algorithms, Theory of Probability

Graduate Courses (UT Austin)

Probability & Stochastic Processes, Wireless Communications, Information Theory, Digital Communications

Undergraduate Courses (UT Austin)

Real Analysis, Algorithms, Digital Signal Processing, Real-time DSP Lab, Digital Image and Video Processing, Embedded and Real-Time Operating Systems Lab, Computer Architecture, Digital Logic Design, Foreign Policy, Philosophy, Economics

SKILLS

General Machine Learning, Deep Learning, Software, Optimization, Mechanism Design, Signal Processing, Communications, Robotics, Web development

Languages & Tools Python, SQL, TensorFlow, C, C++, Java, Julia, MATLAB, JavaScript

Other Languages English (native), Hindi (fluent), Spanish (read)