Tanvi Bajpai

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EDUCATION

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN
Ph.D. in Computer Science
Fall 2019 - Present
GPA: 4.0

CARNEGIE MELLON SCHOOL OF COMPUTER SCIENCE
B.S. in Computer Science and
Discrete Mathematics & Logic
2015 - 2019
GPA: 3.5
University Honors

COURSEWORK

GRADUATE
Randomized Algorithms
Consensus Algorithms

UNDERGRADUATE
A Theorist's Toolkit
Spectral Graph Theory
Algorithm Design and Analysis
Computational Discrete Math
Compiler Design
Designing Human Centered Software

SKILLS

- Python • C • Java
- OCaml • SML
- HTML/CSS
- JavaScript/Node.js
- Processing
- Bootstrap

ADDITIONAL INVOLVEMENT

- SCS Dean Search Committee
- Women@SCS
- CMU SCS Tours and Panels
- External Speaker Curator and Event Coordinator for TEDxCMU 2016

WORK EXPERIENCE

CARNEGIE MELLON | Teaching Assistant
2016 - 2019

- 15-151: Mathematical Foundations of Computer Science (F16, F17*, F18*)
  - Developed class materials to teach fundamental math concepts for first year computer science and mathematics students.
  - Lead recitation sections and review sessions.
  - * indicates semester as Head TA. Managed course staff, facilitated staff meetings, delegated grading responsibilities and created grading rubrics. Oversaw hiring (and achieved 50-50 gender balance on course staff by F18)
- 15-451/15-651: Algorithm Design and Analysis (S18, S19)
  - Lead recitation sections and review sessions.
  - Created course notes for new lectures regarding algorithms for big data and graph spanners.

MICROSOFT | Explorer Intern
Summer 2017

- Worked on XBox Live Social team and their affiliate streaming platform Mixer.
- Developed Node.js SDK to aid in chat-bot creation for Mixer and XBL users.
- Created a moderator chat-bot named MOSSMO that could monitor the overall sentiment of a chat and report users in order to demonstrate the SDK's functionality.

RESEARCH

BOOTSTRAPPING VIRTUOUS ACTIVE LEARNING CYCLES (BOVALY)
Fall 2017 - Spring 2019 | Carnegie Mellon
Worked to develop discrete algorithmic frameworks to dynamically rank both students and student-sourced quiz questions based on peer performace and review. Worked with Professors R. Ravi and Wolfgang Gatterbauer.

FAIR CLUSTERING WITH OUTLIERS
Summer 2018 | University of Maryland at College Park
Defined a bias-aware version of the canonical k-clustering with outliers problem. Created and adapted clustering algorithms to promote fairness and diminish bias. Worked with Professor Samir Khuller.

DIVERSIFYING RECOMMENDATIONS
2017 | Carnegie Mellon.
Developed a novel metric for diversity in recommendations that focused on increasing the diversity for item audiences. Formulated algorithms to optimize for the metric. Worked with Professor R. Ravi. Published in the SIAM Journal on the Mathematics of Data Science (2019).

AWARDS

K& L GATES PRIZE | 2019

CMWA OUTSTANDING GRADUATING SENIOR AWARD | 2019

STEHLIK INTRODUCTORY & SERVICE TEACHING AWARD | 2019

CMU SENIOR LEADERSHIP RECOGNITION | 2019

MARK STEHLIK UNDERGRADUATE IMPACT SCHOLARSHIP | 2018