

# Tanvi Bajpai

PhD Candidate and Graduate Research Assistant

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tanvibajpai.com

## EDUCATION

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- **University of Illinois at Urbana Champaign (UIUC)** Urbana, IL  
*Ph.D Candidate in Computer Science* Aug. 2019 – May 2024 (Expected)
  - Advisors: Prof. Chandra Chekuri and Prof. Eshwar Chandrasekharan
- **Carnegie Mellon University (CMU)** Pittsburgh, PA  
*B.S. in Computer Science (Additional Major in Discrete Math & Logic)* Aug. 2015 – May. 2019
  - Research Advisor: Prof. R. Ravi

## PUBLICATIONS

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Papers Under Submission and Pre-prints

- **Bicriteria Approximation Algorithms for Priority Matroid Median**  
Submitted for peer-review in September 2022; arXiv:2210.01888  
Tanvi Bajpai, Chandra Chekuri
- **Measuring User-Moderator Alignment on r/ChangeMyView.**  
Submitted for peer-review in July 2022  
Vinay Koshy, Tanvi Bajpai, Eshwar Chandrasekharan, Karrie Karahalios, Hari Sundaram
- **ConvEx: A Visual Conversation Exploration System for Discord Moderators.**  
Submitted for peer-review in July 2022  
Frederick Choi, Tanvi Bajpai, Sowmya Pratipati, Eshwar Chandrasekharan

Peer-Reviewed Conference Publications

- **Harmonizing the Cacophony with MIC: An Affordance-aware Framework for Platform Moderation.**  
ACM Conference On Computer-Supported Cooperative Work And Social Computing [CSCW 2022]  
Tanvi Bajpai, Drshika Asher, Anwesa Goswami, Eshwar Chandrasekharan
- **Revisiting Priority  $k$ -Center: Fairness and Outliers.**  
International Colloquium on Automata, Languages and Programming [ICALP 2021]  
Tanvi Bajpai, Deeparnab Chakrabarty, Chandra Chekuri, Maryam Negahbani

Peer-Reviewed Journal Publications

- **A new system-wide diversity measure for recommendations with efficient algorithms.**  
SIAM Journal of Mathematics of Data Science, Volume 1 [SIMODS 2019]  
Arda Antikacioglu, Tanvi Bajpai, R. Ravi

## HONORS AND AWARDS

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**UIUC CSD Outstanding TA Award** Fall 2020

- Given to five teaching assistants in the Computer Science Department each semester. Teaching assistants are nominated by faculty members for their dedication to teaching.

**K&L Gates Prize**

2019

- University award for graduating senior who has best inspired fellow students at the university to love learning through a combination of intellect, high scholarly achievement, engagement with others and character.

**CMU Women's Association Outstanding Graduating Senior Award** 2019

- Award for graduating senior students, with a preference for students who demonstrate a commitment to the advancement of women in their academic pursuits.

**Mark Stehlik Introductory & Service Teaching Award** 2019

- Award for graduating senior who brings their best and indispensable efforts to teaching introductory courses.

**CMU Senior Leadership Recognition** 2019

**CMU University Honors** 2019

**Mark Stehlik SCS Alumni Undergraduate Impact Scholarship** 2018

- Scholarship recognizes and supports CMU School of Computer Science undergraduates whose drive for excellence extends beyond the classroom - students who make a difference both in the field of computer science and the world around them.

## EXPERIENCE

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- **Illinois Secondary Teaching and Computer Science Initiative** Urbana, IL  
*Course Designer and Instructor* Fall 2020 - May 2022
  - Designing and teaching discrete mathematics course for Illinois secondary school teachers as a part of a Computer Science accreditation program.
- **Microsoft** Redmond, WA  
*Explorer Intern* Summer 2017
  - Worked for the Xbox Live Social team and their affiliate streaming platform Mixer. Developed a Node.js SDK to aid in chat-bot creation for Mixer and XBL users, and 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.

## TEACHING

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I've worked as a teaching assistant for the following courses:

- **University of Illinois at Urbana-Champaign**
  - CS 598SC: Social Computing. Spring 2022
  - CS 374: Introduction to Algorithms and Models of Computation. Fall 2020<sup>+</sup>, Fall 2021
  - CS 473: Algorithms. Spring 2020
  - CS 173: Discrete Structures. Fall 2019<sup>+</sup>, Summer<sup>+</sup>
  - + - denotes semester placed on *Teachers Ranked as Excellent* list.
- **Carnegie Mellon University**
  - 15-451/15-651: Algorithm Design and Analysis. Spring 2018, Spring 2019
  - 15-151: Mathematical Foundations of Computer Science. Fall 2016, Fall 2017\*, Fall 2018\*
  - \* - denotes semester serving as Head Teaching Assistant.

## STUDENT ADVISING

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- **Sowmya Pratipati** (Fall 2021 - Fall 2022)  
Sowmya received the UIUC CS Stars Fellowship in Fall 2021 and Fall 2022.
- **Drshika Asher** (Summer 2021 - present)  
Drshika received the UIUC CS Stars Fellowship in Fall 2021. During the summer of 2022, she interned at Microsoft Research. In Spring 2022, she was named a Clare Boothe Luce Scholar.
- **Anwesa Goswami** (Spring 2021)

## SERVICE AND OUTREACH

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### Reviewing

- **Operations Research Letters**,  
Journal (2021 - 2022)

### Outreach

- **Graduate Women in Computer Science (GradWCS)**  
Co-President (UIUC, 2019 - 2021)
- **Women School of Computer Science (W@SCS)**  
Undergraduate Event Coordinator, Graduate Student Liaison (CMU, 2017 - 2019)

### Institutional Service

- **Broadening Participation in Computing Committee**  
(UIUC, 2020 - 2021)
- **School of Computer Science Dean Search Committee**  
(CMU, 2018 - 2019)

## TECHNICAL SKILLS

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- **Programming Languages:** Python, Java/Javascript, C/C++, OCaml, Processing, HTML/CSS
- **Technologies:**  $\text{\LaTeX}$ , Jupyter Notebook, Pytorch