

Tanvi Bajpai

PhD Candidate and Graduate Research Assistant

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EDUCATION

- **University of Illinois at Urbana Champaign (UIUC)** Urbana, IL
Ph.D Candidate in Computer Science Aug. 2019 – May 2025
 - 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
 - Graduated with University Honors
 - Research Advisor: Prof. R. Ravi

WORK EXPERIENCE

- **AliveCor** Mountain View, CA
Data Science Research Intern May 2023 - August 2024
 - Conducted exploratory research to develop machine learning models for analyzing and classifying electrocardiogram data that will monitor and track real patients' heart health.
- **Illinois Secondary Teaching and Computer Science Initiative** Urbana, IL
Course Designer and Instructor Fall 2020 - May 2022
 - Designed and taught 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.

PUBLICATIONS

Papers Under Submission and Pre-prints

- ***Covering with Few Submodular Constraints: A Generalized Approach to Fair Covering.***
pre-print; to be submitted for peer review in September 2024
Tanvi Bajpai, Chandra Chekuri, Pooja Kulkarni
- ***Beyond the Black Box: Towards Evaluating and Optimizing Reddit's Modqueue.***
pre-print; to be submitted for peer review in September 2024
Tanvi Bajpai, Eshwar Chandrasekharan

Peer-Reviewed Conference Publications

- ***Bicriteria Approximation Algorithms for Priority Matroid Median.***
ACM International Conference on Approximation Algorithms for Combinatorial Optimization Problems (APPROX '23)
Tanvi Bajpai, Chandra Chekuri

- ***Measuring User-Moderator Alignment on r/ChangeMyView.***
ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW '23)
**Received Best Paper Award
Vinay Koshy, **Tanvi Bajpai**, Eshwar Chandrasekharan, Karrie Karahalios, Hari Sundaram
- ***ConvEx: A Visual Conversation Exploration System for Discord Moderators.***
ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW '23)
Frederick Choi, **Tanvi Bajpai**, Sowmya Pratipati, Eshwar Chandrasekharan
- ***Harmonizing the Cacophony with MIC: An Affordance-aware Framework for Platform Moderation.***
ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW '22)
Tanvi Bajpai, Drshika Asher, Anwesa Goswami, Eshwar Chandrasekharan
- ***Revisiting Priority k -Center: Fairness and Outliers.***
International Colloquium on Automata, Languages and Programming (ICALP '21)
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 '19)
Arda Antikacioglu, **Tanvi Bajpai**, R. Ravi

HONORS AND AWARDS

- **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.

TEACHING

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⁺, Fall 2021
- CS 473: Algorithms. Spring 2020
- CS 173: Discrete Structures. Fall 2019⁺, Summer 2020⁺

- **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 placed on *Teachers Ranked as Excellent* list, * denotes semester serving as Head Teaching Assistant.

STUDENT ADVISING

- **Sowmya Pratipati** (Fall 2021 - Spring 2024)

Sowmya received the UIUC CS Stars Fellowship in Fall 2021 and Fall 2022.

- **Drshika Asher** (Summer 2021 - Spring 2024)

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

Reviewing

- **ACM Conference on Human Factors in Computing Systems** (2024)
- **ACM-SIAM Symposium on Discrete Algorithms**(2024)
- **ACM Conference On Computer-Supported Cooperative Work And Social Computing** (2023)
- **Operations Research Letters Journal** (2021-2022)

Outreach

- **Graduate Women in Computer Science (GradWCS)**
Founder, Co-President (UIUC, 2019 - 2021, 2023 - present)
- **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

- **Programming Languages:** Python, Java/Javascript, C/C++, OCaml, Processing, HTML/CSS
- **Technologies:** L^AT_EX, Jupyter Notebook, TensorFlow, Pytorch