

## EDUCATION

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December 2021   **B.S Computer Science + Crop Sciences**   UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN  
GPA: 3.56/4.0

## PUBLICATIONS AND PRESENTATIONS

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### CONFERENCE AND JOURNAL PUBLICATIONS

1. Mahmood, S., Zhao, M., **Khan, O.**, Herman, G. L. (2020). **Caches as an Example of Machine-gradable Exam Questions for Complex Engineering Systems.** In Proceedings of the 49th ASEE/IEEE Frontiers in Education Conference, Uppsala, Sweden, Oct. 21-24. <https://doi.org/10.1109/FIE44824.2020.9273822>

### PRESENTATIONS

1. Deep, H., Huang, J., Dembi, R., **Khan, O.**, Angrave, L.. **Webcam Eye-Tracking Based Accessibility for ClassTranscribe.** Virtual poster presentation: Illinois Undergraduate Research Symposium 2021

## HONORS AND AWARDS

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November 2021   **Nominee**   KNIGHTS OF ST. PATRICK  
Annual award given by the Grainger College of Engineering to approximately 10-15 students who represent leadership, excellence in character, and exceptional contribution to the engineering and its students; one of the highest honors received by a student from the Grainger College of Engineering.

April 2021   **Most Long-Term Social Impact**   STANFORD OPEN DATATHON 2021  
Co-authored a policy memo for open data on mental health services across UK universities; recognized by the Stanford Ethics, Society, and Technology Hub for its potential for the most long-term social impact and to be piloted at the University of Edinburgh

February 2021   **Engineering Fellow Finalist**   KLEINER PERKINS  
Engineering Finalist for the Kleiner Perkins Fellowship, a venture capital firm that has been instrumental to the growth of promising startups across the San Francisco Bay Area

August 2020-present   **The Climate Corporation Scholarship**   THE CLIMATE CORPORATION  
Awarded annually to a Computer Science + Crop Sciences student that demonstrates outstanding academic and extracurricular achievements

## RESEARCH EXPERIENCE

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Sept 2021-present   **National Center for Supercomputing Applications – Research Assistant**   URBANA, IL  
*Advisors: Dr. Megan Dailey and Dr. Matthew Hudson*  
- Researching and developing a mobile app aimed to create a marketplace to provide food banks with the means to procure fresh produce from farmers at a reduced cost, acting as a delivery service similar to common food delivery applications, and aiming to reduce food waste and insecurity

**ORCHID Lab – Undergraduate Research Assistant**

Jan-May 2021

*Advisor: Dr. Brian P. Bailey*

URBANA, IL

- Researched methodologies, technology, and visualizations to help individuals carry out better goal setting; the focus was primarily on proximal process goals (goals that are achievable in a short amount of time and involve specific processes)
- Investigated effects of anchoring and adjustment, social comparison, and prospect theory on goal setting and how we can create a system that allows users to overcome these psychological phenomena when setting goals

**ClassTranscribe – Undergraduate Research Assistant**

Jan-May 2021

*Advisor: Dr. Lawrence C. Angrave*

URBANA, IL

- Investigated the challenges of webcam-based eye tracking and a possible implementation of it in ClassTranscribe, an online lecture streaming and archiving platform at UIUC

**Electrophysiology and Language Processing Lab – Data Analyst**

Aug 2019-May 2020

*Advisor: Dr. Jeffrey Green*

CHAMPAIGN, IL

- Designed data representations and visualizations to better display post-experiment results and trends using Python, NumPy, and Pandas, facilitating more robust experimental procedures
- Aimed to understand how memory and language proficiency affect language interpretation and comprehension

**University of Illinois at Urbana-Champaign – Undergraduate Research Assistant**

May-Aug 2019

*Advisor: Dr. Geoffrey L. Herman*

URBANA, IL

- Designed and implemented a computerized, multi-part exam with another undergraduate student on pipelining and cache analysis for CS 233: Computer Architecture through UIUC's open-source exam distribution and testing environment, using Docker, HTML, CSS, JavaScript, and Python

**TEACHING EXPERIENCE**

Jul 2019-May 2021

**CS 233: Computer Architecture – Course Assistant**

URBANA, IL

- Maintained and developed course content (deployed new homework questions, assisted with plagiarism detection), taught a discussion and lab section of 25-30 students with a graduate teaching assistant, and held weekly office hours

Aug 2018-Dec 2019

**CS 196-25: Freshman Honors – Course Assistant, Project Manager**

URBANA, IL

- Led several groups of 4-7 students that work on a semester-long project of their choice, teaching them skills crucial in industry, such as thorough understanding of control flow, proper coding style, and communication

Aug 2018-May 2019

**CS 125: Introduction to Computer Science – Course Assistant**

URBANA, IL

- Facilitated bi-weekly office hours and facilitated a weekly 'Even More Practice' (EMP) session, aimed to provide additional help at a slower pace and reinforce fundamental concepts learned in the week's lecture

**PROFESSIONAL EXPERIENCE**

May-Aug 2021

**Viasat – Software Engineer Intern**

CARLSBAD, CA

- Jira Project Archiver: Designed and implemented a Slack + Jira integration using Python, SQLAlchemy, and Slack's Bolt SDK for seamless project management, archival of older initiatives, and increased automation of daily tasks

Jun-Aug 2020

**L'Oreal USA – Software Engineer Extern**

NEW YORK, NY

- Product Design: Collaborated with a team of 4 externs in a product design competition, implementing a data-driven solution to reduce the amount of plastic used in L'Oreal product packaging
- Technical Training: Completed training and gained greater familiarity with DevOps, machine learning, cloud architecture, enterprise architecture, UX design principles, and cybersecurity

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## EXTRACURRICULAR ACTIVITIES

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2021-present	<b>Campus Co-Director and Head of Fundraising</b> - Co-leading the UIUC chapter of The Percentage Project, a 501(c)(3) nonprofit organization dedicated to helping every person of every background embrace their diversity and feel a sense of belonging in the fields they pursue, especially computing and tech-oriented fields)	THE PERCENTAGE PROJECT
2021-present	<b>Mentoring Co-Chair</b> - Coordinate mentorship events and programs for incoming students in CS focused on course planning, extracurricular involvement, and academic support	WOMEN IN COMPUTER SCIENCE
2020-2021	<b>Co-Founder and Outreach Chair</b> - Outreach coordinator for a new mental health organization dedicated to spreading awareness about the importance of mental health in technology and the benefits of sparking dialogue about mental health and diversity in tech-related fields	CS MENTAL HEALTH COMMITTEE
2020-present	<b>Projects and Workshops Curriculum Development Co-Lead</b> - Teach and lead workshops for 3rd-12th grade girls about introductory concepts in programming and web development (HTML/CSS, JavaScript) - Co-leading curriculum development for Girls Who Code at UIUC, ideating new project, workshop, and assessment ideas for program participants	GIRLS WHO CODE
2018-2020	<b>Content x Diversity Co-Chair</b> - Facilitated a team of 15 students who reached out to leaders in industry and academia worldwide to speak about the impact that computing and technology has made in their respective fields	REFLECTIONS   PROJECTIONS
2019-2020	<b>Co-Director</b> - Co-directed a team of 10 staff members to organize a day-long event for 500+ admitted and prospective students, introducing them to the Department of Computer Science at UIUC, and all of the opportunities available to them here as students - Oversaw website and app development, marketing strategies, branding design, and external relations with 50+ high schools	ILLINOIS COMPUTER SCIENCE SAIL
2019-2021	<b>Content x Diversity and, Experience Team</b> - Created main guidelines and events for 800+ attendees with a team of 15 students; served as a main point of contact for food vendors and event logistics	HACKILLINOIS

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## OUTREACH AND PROFESSIONAL DEVELOPMENT

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Fall 2021-present	<b>Mentee</b> - Supervised by a Ph.D recipient at Google, receiving advice on career paths with research, and tips to succeed in graduate school	GOOGLE CS RESEARCH MENTORSHIP PROGRAM (CSRMP)
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## SKILLS

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**Languages:** Java, Python, JavaScript, Swift, C++, HTML, CSS, SQL, MongoDB, Neo4J  
**Tools/Technologies:** Git, Bash, Docker, Kubernetes, GitHub, GitLab, LaTeX, Xcode  
**Libraries/Frameworks:** SQLAlchemy, React, Flask, Matplotlib, NumPy, Pandas, NLTK, d3.js  
**Project and Program Management:** Scrum, Agile, Jira, Trello