Omar Khan

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Education

University of Illinois at Urbana-Champaign Champaign, IL

Bachelor of Science in Computer Science + Crop Sciences, Minor in Linguistics; GPA: 3.53/4.0 *Expected May 2022*

Relevant Coursework: Data Structures and Algorithms, Discrete Structures, Computer Architecture, Computer Systems, Database Systems, Elements of Syntax, Elements of Semantics and Pragmatics, Probability and Statistics for Computer Scientists, Algorithms and Models of Computation, Artificial Intelligence, Programming Languages and Compilers *(in progress)*, Social Visualization *(in progress)*

Skills

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

Experience

L'Oreal U.S.A New York, NY

Software Engineering Extern, eAcademy Intern *June 2020 - August 2020*

- **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

Electrophysiology and Language Processing (ELP) Lab Champaign, IL

Software Engineering Intern, Data Analyst *August 2019 - May 2020*

- **Responsibilities**: Designed data representations and visualizations to better display post-experiment results and trends using Python, NumPy, and Pandas, facilitating more robust experimental procedures
  - Project goal: understanding how memory and language proficiency affect language interpretation and comprehension

University of Illinois at Urbana-Champaign Urbana, IL

Software Engineering Intern, Research Assistant *June 2019 - Present*

- **PrairieLearn**: Designed and implemented a computerized exam 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
  - Expanded practice exam and homework question pool by 45%

University of Illinois at Urbana-Champaign Champaign, IL

Project Manager, Course Assistant, Course Developer *August 2018 - Present*

- **CS 233: Computer Architecture**: Managed the course infrastructure (website, deploying new homework questions, plagiarism detection), teach a discussion and lab section of 25-30 students, and hold weekly office hours
- **CS 196-25: Freshman Honors**: 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

Leadership

Illinois Computer Science Sail Urbana, IL

Co-Director *April 2019 - May 2020*

- **Responsibilities**: Lead 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
  - Oversee website and app development, marketing strategies, branding design, and external relations with 50+ high schools

ACM Reflections | Projections Conference Urbana, IL

Content + Diversity x Tech Co-Chair *December 2019 - Present*

- **Roles**: Facilitate a team of 15 people who reach out to companies, engineers, and executives nationwide to speak about the impact that computing and technology has made in their respective fields

Publications

S. Mahmood, M. Zhao, O. Khan and G. L. Herman, "**Caches as an Example of Machine-gradable Exam Questions for Complex Engineering Systems,**" 2020 IEEE Frontiers in Education Conference (FIE), Uppsala, 2020, pp. 1-9, doi: 10.1109/FIE44824.2020.9273822.

Projects

- **Health Hub**: Designing an iPhone app that will host *all* medical records and data from the various medical professionals a person visits (primary physician, dentist, etc)
  - Goal: make access of all medical records painless, while also emphasizing security and privacy