Aaqel Shaik

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EDUCATION

University of Illinois Chicago (UIC)   Aug 2021 – May 2025
Bachelor of Science in Computer Science
- **GPA**: 3.96/4.00
- **Research Interests**: Natural Language Processing, Spatial Computing, Visualization

RESEARCH EXPERIENCE

Visualizing Protein-Protein Interactions For Drug-Discovery Using LLMs
Undergraduate Researcher, Electronic Visualization Lab, UIC (with Dr. Michael Papka)   Sep 2024 – Present
Research Aide, Argonne National Laboratory (with Dr. Michael Papka and Dr. Silvio Rizzi)   May 2024 - Aug 2024
- Developed an AI virtual assistant for scientists engaged in protein-protein interaction (PPI) research.
- Implemented predictive analysis to accelerate hypothesis-generation on potential protein behavior.

Optimizing SAGE Crosswalk Pedestrian Detection for ARM64
Undergraduate Researcher, Electronic Visualization Lab, UIC (with Dr. Michael Papka)   Sep 2023 – Apr 2024
Research Aide, Argonne National Laboratory (with Dr. Michael Papka)   May 2023 - Aug 2023
- Developed ML and web components to demonstrate the real-time processing of edge data from SAGE nodes distributed around the Chicagoland area.
- Build and test prototype SAGE Education Nodes to be used in classrooms for hands-on learning.

Developing a USB Debugger Interface for ECU Communication
Undergraduate Research, Dept of ECE, UIC (with Dr. Jon Komperda)   Jan 2024 – Apr 2024
- Worked with a team of ECE students to develop an industry-approved system for a corporate sponsor.
- Researched and tested various userspace libraries for establishing USB gadgets in the Linux kernel.

PRESENTATIONS

Oral Presentations (Presenters Underlined)
- **A. Shaik**, M. Papka, Shilpika, V. Vishwanath, *"Visualization of Protein-Protein Interactions For Drug-Discovery Using LLMs,"* UIC LAS Faculty Research Symposium - AI Impact, Chicago, IL, 24 October 2024.
- F. Massa, A. Ali, **A. Shaik**, M. Papka, S. Rizzi, *"GENIUS: AI Powered Assistant For Scientific Research,"* Sandia 6th Annual XR Conference, Albuquerque, NM, 23 July 2024.

Poster Presentations (Presenters Underlined)
- **A. Shaik**, A. Ali, F. Massa, M. Papka, S. Rizzi, *"GENIUS: AI Powered Assistant For Scientific Research,"* Argonne CELS Poster Day, Lemont, IL, 30 July 2024.

TECHNICAL SKILLS

Languages: Python, C/C++, F#, Swift, Java
Developer Tools: Git, Linux CLI
Libraries: NumPy, Matplotlib, RealityKit

EXTRACURRICULAR ACTIVITIES

Undergraduate Research: AFL and Imitation Learning   Nov 2022 – Sep 2023
- Researched greybox fuzzing strategies employed by AFL.
- Trained a model to imitate AFL to build a fuzzer that leverages higher-order fuzzing to fuzz lower-order code.

Undergraduate Research: Provably Correct Programming   Jan 2022 – May 2022
- Researched the technologies involved in proof automation.
- Utilized the Coq proof assistant to prove the MU puzzle.

Association for Computing Machinery at UIC (ACM@UIC)   Aug 2021 – Dec 2022
- Led various workshops on common meta-programming and debugging tools.
- Performed various secretarial duties like drafting outreach emails and corresponding with third parties regarding events.
- Planned and executed club merchandise production from the design to manufacture.