Zyad Shehadeh

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EDUCATION

The University of Michigan (College of LSA Honors) Ann Arbor, MI — July 2020 - December 2023
Computer Science (B.S.) — (3.7/4.00 GPA)

Scholarships and Awards: Offutt Presidential Family Scholarship; Robert & Tisch Endowed Scholarship; Victors Award; Herbert E. Boynton Scholarship; Rosalie Ginsberg Scholarship; Jamal Scholarship; Angell Scholar; Honors with Distinction

Communities: Research Scholars; Undergrad Research Opp Program; Honor Council; Chess Club; MANA Metabolomics

Relevant Coursework: Operating Systems; Web Systems; Databases; Computer Networking; Machine Learning; Theory of Computation; Data Structures and Algorithms; Computer Architecture; Discrete Mathematics; Linear Algebra; Differential Equations; Computer Security; Statistics and Probability; Honors Multivariable Calculus

PROFESSIONAL EXPERIENCE

Software Engineer - ASML, San Diego — May 2023 - Present

- Developed data processing pipeline from XML parsing to BI report generation, used daily for insights by scientists.
- Designed and implemented distributed monitoring pipeline using Spark, Databricks, KQL, Python, and Azure for Cymer Light.
- Deployed urgent on-premises data management solution for Wilton Forensics team - Flask indexing and analytics app for petabytes of forensics data, improving operational efficiency more than 10x while ensuring alignment with classified architecture. Working to extend and scale utility of application to other departments at Wilton and Berlin.

Software Engineer - Latch AI, San Francisco — May 2022 - September 2022

- Worked in a fast-paced startup to build out cloud bioinformatics infrastructure alongside a team of full-stack engineers.
- Deployed and iterated on 4 workflow releases for researchers using Docker and Latch SDK, expanding the software's user base.

Research Intern - University of Michigan Medical School, Ann Arbor — August 2020 - May 2022

- Repurposed R scripts and developed them into a back end for a reactive R Shiny web application, used in publication of paper.
- Prototyped integration of metabolic tools such as LINCS database based on researched literature.
- Utilized machine learning algorithms in workflow of application including RPART, LDA, SVM, RF, GBM, PAM, and LOG for pathway analysis and identification of drug discovery biomarkers.

Discrete Mathematics (EECS 203) Grader - University of Michigan, Ann Arbor — August 2021 - December 2021

- Graded and gave feedback on assignments for over 900 students on a weekly basis.

PROJECTS

Comment Anywhere Browser Extension

- Developed a search engine with advanced features using Microsoft's Bing API. Working on extensions to augment Google.

DisplaySquare

- An Instagram-like project display platform using React, Flask, and SQL/Supabase and hosted it on AWS.

Multithreaded Network File Server

- Created a fine-grained locked multi-threaded hierarchical file system using C, allowing clients to interact via network messages.

Kernel Pager for Memory Management

- Designed and implemented a pager within the Linux kernel to manage virtual address spaces of application processes.
- Optimized design with simulated memory management hardware and emulated page tables with access to physical memory/files.

Routing Optimizer

- Implemented optimal MST algorithm, a fast heuristic to estimate TSP, and a branch and bound algorithm for smaller networks.

EXTRACURRICULAR ACTIVITIES

MES Board Member (Mentorship and Networking Chair) — August 2021 - May 2022

- Coordinated countless career fair workshops, academic workshops, alumni panels, social events, fundraising events, etc.

Students Organize for Refugees: Advocate and Refugee Tutor — January 2021 - May 2022

- Giving back to the community by tutoring 2 high school or middle school refugees every week.

Michigan Hackers (Machine Learning, Computer Security); — August 2020 - May 2021

- Learned fundamentals of Machine Learning in python, worked on solving CTFs to prepare for big CTF competitions.

Founder of the Cyber Security/Coding Club — August 2017 - May 2020

- Competed in "Capture the Flag" Nation-wide Competitions & Hackathons with teammates and led the team to victories.

SKILLS:

C++, C, Python, Java, R / Shiny, Go, C# | Flask, React, REST API, SQL, MongoDB | Docker, AWS, Azure
English, Arabic, Mandarin | Researcher, Teamwork | Avid Chess Player