Zakariya Sattar

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Education

Michigan State University - *Computer Science, Bachelors* Expected: May 2026, GPA: 3.69

- Relevant Coursework: Data Structures and Algorithms, Computer Organization and Architecture, Intro to Computer Science II (C++), Discrete Structures in Computer Science, Independent Study: DSA for Competitive Programming

Experience

Software Engineering Intern – *UST Global* | *Aliso Viejo, CA* June - August 2024

- Developed a plugin for a major airline using C# and REST APIs to integrate Adobe Magento with Unity, dynamically displaying thousands of results in a VR interface. Also worked on 3D image generation using Blender and Python
- Wrote Python scripts for a leading pharmaceutical company that leveraged SciPy and Fourier Transformations to detect glass vial breakage on their production line, resulting in a detection rate of over 70% and an increase in production efficiency

Undergraduate Research Assistant - *Networks Lab* | *MSU* October 2023 - Present

- Constructed and analyzed IMS servers on Android to detect vulnerabilities in SIP messaging. Achieved successful interjection of doctored voice packets into RTP stream without root access. Presented weekly findings to mentors

Software Engineering Intern – *AmeriCloud* | *Schaumburg, IL* May - August 2023

- Led the front-end development of a React-Native application for AmeriCloud's telecommunication partners

Projects

Quirk Health – *Full Stack* | github.com/zakariyasattar/quirk | requirk.com

- Developed a Full-Stack web application to search and display service data from hospitals throughout the country for pricing and insurance information. **Placed in top 10% of Y-Combinator applications for the YC S24 batch**
- Parsed and stored 3+ TB of raw hospital and insurance pricing data into MongoDB Atlas using Pandas DataFrame
- Through MongoDB querying and serverless functions, achieved retrieval of >1000 results in under two seconds, reducing wait time by 87%. Utilized Geocoding APIs and Geospatial Querying to filter and sort results according to user location

Trading Algorithm – *Python* | github.com/zakariyasattar/lvl_2

- Implemented a trading algorithm that leverages level II market data pulled from Alpaca and IEXFinance APIs, to autonomously execute buy and sell orders based on bid and ask counts, resulting in a success rate of 46%

Niles West Bus App – *Web* | nwbusapp.netlify.app

- Discovered a flaw in the school bus mapping system and led the development of an app that tracks school buses and displays the data, actively used by 350+ students today

Skills

Front-End Development: JavaScript, NodeJS, HTML, CSS, ReactNative. Object Oriented: Java, C++, Python. Linux