Saketh Ogirala

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EDUCATION

UNIVERSITY OF MICHIGAN **Ann Arbor, MI**

Candidate for Bachelor of Engineering in Computer Science | GPA: 3.42 *May 2025*

Course Highlights: Computer Programming, Computer Logic, App Development, Data Structures and Algorithm, Discrete Mathematics, Computer Organization, Introduction to AI, Web Systems, UI/UX

PROFESSIONAL EXPERIENCE

ROBERT BOSCH **Plymouth, MI**

Software Engineer Intern *May 2023 — August 2023*

- Formulated a program to revolutionize GM's automated parking Electronic Control Units (ECU) data analysis. Used Python to automate process, generating XML trees, and organizing data into dedicated folders, attaining a remarkable runtime of ~105 milliseconds for processing over 50 files of data.
- Engineered a inventory management system for EPS (Parking) department, streamlining tracking and resource allocation for over 50 items and 15+ benches. Pioneered a robust database for seamless addition, removal, and conjoining of benches, elevating operational efficiency based on SQL project.
- Designed a visual model using Stateflow to conceptualize and analyze the OneParking feature for potential integration in Bosch-affiliated vehicles. OneParking disrupts conventional approach by consolidating 8-12 ECUs into one centralized ECU, optimizing signal transmission, and data efficiency throughout vehicle.

ROBERT BOSCH **Plymouth, MI**

Software Engineer Intern *May 2022 — August 2022*

- Collaborated with software architects to design and visualize analytical solutions using Simulink MATLAB, building logic-based diagrams. Constructed a running program to simulate LED lights charges in a car, achieving a remarkable ~5% improvement in energy efficiency compared to previous model.
- Developed an innovative PremiumTorque adaptation applying real-time steering wheel torque data to calculate optimal steering angles, resulting in a ~15% increase in precision of vehicle turning points, boosting overall driving performance, and improving ride satisfaction for the user.
- Authored and summarized system and software requirements in DOORs, capturing over 40 customer specifications. Demonstrated proficiency in testing application with real-time technology, carrying out in CANoe to simulate a car and assess software requirements functionality.

STEM1 **Novi, MI**

Coding Instructor *June 2021 — November 2021*

- Mentored a group of 30+ children (ages 9-15) in Java, Python, and Scratch, fostering programming understanding and logic generating a simple calculator program: add, subtract, multiple, and divide.
- Orchestrated targeted outreach strategies, driving an ~8% increase in company's website traffic and expanding community presence.

PROJECT EXPERIENCE

Client-Side Web Development - Instagram Project *February 2024*

- Built an interactive web application that mirrors key functionalities of Instagram, showcasing a modern stack inclusive of JavaScript frameworks for client-side interactions, HTML5 for semantic structuring, and CSS3 for aesthetic design and responsive layouts.
- Produced a RESTful API using Flask to serve as the backend, facilitating CRUD operations for posts, comments, and likes. Demonstrated proficiency in API testing and documentation, ensuring robust backend functionality.
- Implemented responsive client-side interfaces with React.js, establishing a seamless user experience. Employed advanced JavaScript concepts, state management, and asynchronous API calls to create interactive, real-time web pages.

Asteroids Game Development Project *February 2024*

- Pioneered the creation of an engaging "Asteroids" game, written in JavaScript and jQuery, featuring a compatible UI with cross-browser compatibility, successfully functioning on the latest version of Google Chrome.
- Devised game logic for random asteroid generation with varying speeds (1x, 3x, and 5x) and spawn rates (1000 ms for easy to 600 ms for hard level), enhancing difficulty and user engagement across multiple levels.
- Programmed a real-time scoreboard that updated every 500 ms, incorporating a scoring system rewarding players' survival skills and strategic maneuvering, with scores increasing by 40 points for every half-second survived.

SKILLS & INTERESTS

Skills: C++/C, Java, Python, AEEE, CANoe, JavaScript, HTML, Jinja, React, CSS, JQuery
Technology: BitBucket, SmartGit, MATLAB, Stateflow, TPT, CAD, CANape, WinIDEA, Enterprise Architect (EA), AWS
Interests: Basketball, Volleyball, Lifting weights, Trading and selling stocks, Learning about and creating an 8-bit computer