Zeerak Asim

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EDUCATION

QUEEN'S UNIVERSITY *Kingston, ON*

Bachelor of Applied Science in Computer Engineering *Graduated May 2024*
- **Relevant Coursework**: Data Structures, Algorithms, Object Oriented Programming, Software Engineering, Deep Learning

SKILLS

PROGRAMMING: C++, C, Java, Python, JavaScript, TypeScript, PHP, Verilog, VHDL, COBOL

WEB/FRAMEWORKS: React.js, Next.js, Vue.js, Bootstrap, Django, FastAPI, Flask, Qt

TOOLS/TECHNOLOGIES: AWS, Azure, MySQL, Firebase, MongoDB, PostgreSQL, DB2, Linux, Pytest, TensorFlow, Jira, Confluence

EXPERIENCE

SOFTWARE ENGINEERING FELLOW *July 2024 - Sept 2024*

Headstarter *Remote, NY, US*
- Successfully developed projects for deployment using Vercel, **AWS**, applied **LLM** methods such as **RAG**, and utilized **CRUD** and **MVC design patterns**
- **Led** a team of 3 in development, **resolved** merge conflicts, incorporated Agile methodology, maintained **CI/CD** pipelines, implemented **microservice patterns**, and managed project demos that were submitted and viewed **1000+** times
- Built **4+** apps in AI using **Next.js**, TypeScript, JavaScript, **Python**, Git, **Pinecone,** and APIs such as **OpenAI API**, **Gemini API**

COMPUTER ARCHITECTURE & EMBEDDED SYSTEMS TUTOR *Sept 2023 - May 2024*

EngLinks *Kingston, ON*
- Mentored **10+** students in Computer Architecture & Embedded Systems by planning lessons and building rapport.
- Provided clear explanations and concise notes, resulting in an average student improvement of **15-20%** in course grades.
- Helped **90%** of students successfully pass their courses, with several achieving grades above **80%**.

SOFTWARE ENGINEERING INTERN *Oct 2022 - May 2023*

QHDT *Kingston, ON*
- Utilized **Node.js** replacing **Python** code to **optimize** the back-end, resulting in a reduction in processing time by **45%**
- Streamlined the hyperpod **Arduino** data transfer using **JavaScript** and **Express.js** for enhanced reliability, resulting in a **25%** improvement in system response time
- Redesigned the preceding front-end code using **React** and CSS, which enhanced the GUI interface for faster loading time by **16%** and increased overall code efficiency

SOFTWARE ENGINEERING INTERN *July 2022 - Sept 2022*

Gunkii *Remote, BC, CA*
- Developed a responsive UI shopping cart and integrated AfterPay, utilized HTML, Liquid, CSS, and **JavaScript** to increase sales conversions by **8%** and successful checkouts by **5%**
- Implemented website **optimization** through media compression, back-end code refinement, and resolved various UI bugs, resulting in a **15%** speed performance increase and a **10%** rise in the number of users
- Provided peer guidance on GitHub issues and contributed continuous website updates and **optimization** strategies through various platforms like Google Docs and Slack during weekly scrum meetings

PROJECTS

MEMORY ALLOCATOR SIMULATOR | [GITHUB REPO](#)
- Designed a custom memory allocator using **C++** with metadata headers, block splitting & coalescing, and benchmarking.

HYPERLOOP SENSOR SYSTEM (TEMPERATURE & PRESSURE SENSOR SCRIPTS) | [GITHUB REPO](#)
- Programmed scripts for a temperature and pressure sensor module using the **Arduino** platform with **C++** incorporating electrical design principles to relay and monitor sensor data from transducers in real-time

FLASHCARD-GEN (STUDY CARDS GENERATOR) | [WEBSITE](#) | [GITHUB REPO](#) | 550+ VIEWS
- Designed a flashcard app using **Next.js**, Tailwind CSS, Material UI, and **JavaScript**, with the back-end as **Node.js**, and **LLM** integration through the **Gemini API**

AI OLYMPIC BOT (CHATBOT FOR OLYMPICS) | [WEBSITE](#) | [GITHUB REPO](#) | 320+ VIEWS
- Developed an AI bot that answers Olympic FAQS using **Next.js**, Material UI, **JavaScript**, and integrated **LLM** using **Gemini API**

CERTIFICATIONS

ORACLE CLOUD INFRASTRUCTURE AI FOUNDATIONS ASSOCIATE *Completed*

AWS CERTIFIED AI PRACTITIONER *In Progress*