Zeerak Asim

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EXPERIENCE

SOFTWARE ENGINEERING FELLOW   *July 2024 - Present*
Headstarter   *Remote, NY, US*
- Built **4** AI applications using **Next.js**, **Tailwind CSS**, **Material UI**, **JavaScript**, **TypeScript**, **Python**, and APIs such as **Pinecone, OpenAI**, **Gemini API**, **StripeAPI**, **Clerk**, and **Firebase**.
- Successfully developed projects for deployment using **Vercel**, **AWS**, applied **LLM** methods such as **RAG** and utilized **CRUD** and **MVC design patterns**.
- Coached by engineers from Amazon, Bloomberg, and Capital One on **Agile**, **CI/CD**, **Git** and **microservice patterns**.

CONTROL SYSTEMS MEMBER   *Oct 2022 - May 2023*
QHDT   *Kingston, ON*
- Optimized back-end, transitioning from **Python** to **Node.js**, reducing data processing time by **45%**.
- Streamlined the hyperpod **Arduino** data transfer using **JavaScript** and **Express.js** for enhanced reliability.
- 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 DEVELOPMENT INTERN   *July 2022 - Sep 2022*
Gunkii   *Remote, BC, CA*
- Developed a responsive UI shopping cart and integrated **AfterPay**, utilizing **HTML**, **Liquid**, **CSS**, and **JavaScript**, which increased sales conversions by **8%** and successful checkouts by **5%**.
- Implemented website optimization through media compression and back-end code refinement and resolved various UI bugs, resulting in a **15%** speed performance increase and a **10%** rise in user numbers.
- Provided peer guidance on **GitHub** issues and disseminated continuous website updates and optimization strategies through various platforms like **Google Docs** and **Slack** during weekly scrum meetings.

PROJECTS

COMMSCRIPTAI   *Aug 2024 - Present*
- Engineered an app for sales managers to upload sales transcripts and provide feedback to sales representatives.
- Users can upload a PDF transcript, add and manage comments, attach files to comments, and generate a summary of the transcript and associated comments using AI.
- The front-end is built using **Next.js**, **Tailwind CSS**, **Aceternity UI**, **TypeScript**. The back-end is implemented using **Node.js**, **TypeScript**, **JavaScript**, **Python**, **pdf2json**, with **LLM** integration using **Pinecone** and **OpenAI**.

PANTRY MANAGEMENT APP   *Aug 2024 - Present*
- Constructed a pantry management app using **Next.js**, **Material UI**, and **JavaScript** and applied **CRUD** with a back-end database using **Firebase**. Integrated **OpenAI API** to search for recipes that can be cooked with the available ingredients.
- Implemented a search bar to search for ingredients in the pantry conveniently.

VIRTUOPS   *Sept 2023 - April 2024*
- A role-based VM management application for a capstone project that is intended for an operating systems course. Designed to facilitate streamlined administration and user interactions with virtual machines. Implemented using **Kerberos**, **libvirt**, **MySQL**, **Django**, **Nginx**, **Python3**, **Linux**, and **LightDM**.
- Enables differentiated privileges for admins and students, allowing operations like VM creation, snapshot management, and basic permissions, with enhanced administrative controls for firewall rule configurations.

SIMPLE RISC PROCESSOR   *Jan 2023 - April 2023*
- Programmed a Reduced Instruction Set Computing (RISC) style processor using **Verilog HDL**, **Quartus II**, and **ModelSim Altera**. Capable of performing simple operations and other computational instructions.
- Attained more knowledge to gain a greater understanding of computing processors.

EDUCATION

QUEEN'S UNIVERSITY   *Kingston, ON*
Bachelor of Applied Science (B.ASc) in Computer Engineering   *Sept 2020 - May 2024*

ADDITIONAL SKILLS

TECHNICAL SKILLS: HTML, CSS, JavaScript, TypeScript, Linux, VHDL, Verilog, Knime, C++, C, Java, Python, Ruby, Rust, EJS.js, React.js, Vue.js, Next.js, Node.js, Express.js, BeautifulSoup, Bootstrap, Tailwind CSS, Material UI, Aceternity UI, Arduino, PHP, Apache, MongoDB, MySQL, PostgreSQL, Firebase, Kerberos, libvirt, Django, Nginx, LightDM, Pytest, Kubernetes, PyTorch, TensorFlow, Clerk, OpenAI API, Gemini API, StripeAPI, CI/CD, CRUD, LLM, Git

PROGRAMS: Microsoft Office Suite, Figma, Vercel, Google Analytics, Azure, AWS, Google Cloud, Docker, JIRA (SDLC), Asana, Trello, Lucidchart, Slack, Microsoft Teams, Visual Studio/Visual Studio Code