KEESHIGAN PIRABAHARAN

SOFTWARE DEVELOPER / MECHATRONICS ENGINEER

CONTACT

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SKILLS

Full Stack

HTML / CSS / Tailwind

JavaScript / TypeScript

ReactJS / NextJS

Bun / NodeJS / ExpressJS

ORMs (Prisma / Drizzle)

REST / GraphQL

NoSQL (MongoDB)

SQL (MySQL / PostgreSQL)

Mobile

Dart / Flutter

Android / Kotlin

Embedded Systems

C / C++

Linux

Arduino / Raspberry Pi

Data Science / Other

Python

Git

AWS CDK / SDK

Docker / Kubernetes

EDUCATION

B.E.Sc - Mechatronics Systems Engineering
University of Western Ontario
Sep 2017 - Apr 2022
London, ON

WORK EXPERIENCE

Software Development Engineer II | *Curtiss-Wright Defense Solutions*
Ottawa, ON | June 2023 – Present

- Seamlessly integrated data plane and control plane ports to optimize network performance and functionality for a new 100G switch platform
- Developed an automated software testing framework for a new 100G switch platform with multiple variants using Python, Tcl, and Spirent
- Debugged and resolved critical hardware issues causing CPU core failures, halting production and sales of numerous units
- Created a Web GUI platform using React.js and Hiawatha to allow users to make switch configuration adjustments along with existing CLI platform

Software Development Engineer I | *Curtiss-Wright Defense Solutions*
Ottawa, ON | June 2022 – June 2023

- Developed automated C and Bash test software for qualification testing on a hybrid vehicle management / network switch device
- Performed maintenance software releases for switch software, resolving critical customer-facing bugs and enhanced documentation for improved clarity
- Utilized Docker to streamline cross-compilation toolchain setup for ARM SBCs

Software Technical Engineer (PEY) | *Ontario Power Generation*
Pickering, ON | May 2020 – August 2021

- Enhanced plant control software to optimize efficiency and safety of nuclear power plant operations by utilizing MATLAB for simulation and validation
- Engaged closely with regulatory bodies such as the Canadian Nuclear Safety Commission (CNSC) to ensure compliance with regulatory requirements
- Proactively monitored changes in regulatory standards and guidelines, implementing necessary updates to software systems to maintain compliance
- Collaborated with maintenance teams to develop software-based solutions for optimizing outage schedules and reducing downtime

PROJECTS

AI SaaS

- Developed a Chat-GPT like AI SaaS that generates conversation, image, video, code and music responses using various AI models
- Utilized SST to integrate AWS services for production
- Utilized Docker, Postgres and S3 to save expensive AI generated prompts

E-Commerce Store + Admin Dashboard

- Developed an interconnected store and CMS web application using Next.js 13.4 and Shadcn/ui, with the option to create and manage multiple stores
- Integrated Stripe for secure payments and set up webhooks for data sync
- Utilized AWS S3 and RDS to store data for high scalability in production

Smart Home Mobile App

- Developed a smart Android application to facilitate remote control of blinds including a smart mode, leveraging geofence technology for automation
- Integrated Raspberry Pi with Firebase to facilitate user-controlled window and blind operations, incorporating real-time sensor data for prompt adjustments

CERTIFICATION

AWS Certified Cloud Practitioner
Amazon Web Services (AWS)
Issued Mar 2024 • Expires Mar 2027