

KEESHIGAN PIRABAHARAN

SOFTWARE DEVELOPER / MECHATRONICS ENGINEER

CONTACT

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📍 Toronto, ON

SKILLS

Full Stack

HTML / CSS / Tailwind
JavaScript / TypeScript
React / Next
Bun / Node / Express
ORMs (Prisma / Drizzle)
REST / GraphQL
NoSQL (MongoDB)
SQL (MySQL / PostgreSQL)

Embedded Systems

C / C++
Python / Pytest
Linux
Arduino / Raspberry Pi

Software Tools

Jira
Bitbucket
Git / GitHub / GitHub Actions
AWS SDK
Azure 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

- **Spearheaded** the development of an **automated software testing framework** for a **100G switch platform** using **Python**, **PowerShell**, and **Spirent**
- **Designed and deployed** a **React-based Web GUI** integrated with a **Hiawatha backend**, allowing dynamic switch configuration through both **web and CLI interfaces**
- **Integrated Jenkins** to automate **testing pipelines** and **code deployment** for hardware-software integration efforts, **reducing test cycles by 20%**
- **Implemented backend logic** in **Node.js** to interface with **internal APIs** for monitoring hardware health and alerts

Software Development Engineer I | *Curtiss-Wright Defense Solutions*

Ottawa, ON | June 2022 – June 2023

- **Developed automated test software** in **C** and **Bash** for **qualification testing** of hybrid network switch and vehicle management systems
- **Led the migration** of legacy scripts to **Python**, enhancing readability and **reducing runtime errors by 15%**
- **Participated** in **agile ceremonies**, **code reviews**, and **collaborative development**, ensuring alignment with software quality standards
- **Deployed containerized applications** using **Docker** to test **software compatibility** across multiple hardware environments

Software Technical Engineer (PEY) | *Ontario Power Generation*

Pickering, ON | May 2020 – August 2021

- **Performed simulations** using **MATLAB** to **optimize efficiency** and **safety** in nuclear plant operations, meeting Canadian Nuclear Safety Commission (CNSC) standards
- **Collaborated** with a **multidisciplinary team of engineers** to adjust **system and software requirements**, ensuring compliance with **regulatory metrics** and performance benchmarks
- **Assisted** in **automating internal workflows** using **Python scripts**, **cutting down manual reporting time by 30%**

PROJECTS

AI SaaS 🤖

- **Developed** a Chat-GPT like **AI SaaS** that **generates conversation**, **image**, **video**, **code** and **music** responses using various **AI models**
- **Utilized Virtual Machines** and **Container Instance** services for **production deployment**
- **Implemented Postgres** and **Blob Storage** to save expensive **AI generated prompts**

E-Commerce Store 🌐 🌐 🔄 + Admin Dashboard 🌐 🔄

- **Created** an **interconnected store** and **CMS** web application using **Next.js 14** and **Shadcn/ui**, with the option to create and **manage multiple stores**
- **Integrated Stripe** for secure **payments** and set up **webhooks** for data synchronization
- **Leveraged 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

CERTIFICATIONS

Azure Fundamentals

Microsoft • Issued Jul 2024

AWS Certified Cloud Practitioner

Amazon Web Services (AWS) • Issued Mar 2024 - Expires Mar 2027