

AMITH KUMAR DAS ORKO

Software Engineer

@amithkumardasorko@cmail.carleton.ca +1(613)410-5202 Ottawa, ON github.com/amitorko Amith

EXPERIENCE

Research and Digital Resources Coordinator

- Aug 2024 - Present University of Alberta
- Engineered a **full-stack redesign** of a high-traffic academic website, leveraging **React.js** for the front-end and **Python** with **Flask** for the back end
 - Achieved a **30%** reduction in page load times by optimizing server-side data processing using **Express** and implementing advanced caching strategies with **Redis**.
 - Architected a robust data archiving system using **SQL** and **AWS S3**, automating the storage of dynamically changing research data.
 - Integrated **RESTful APIs** to streamline communication between the front-end and back-end services, improving data synchronization and reducing latency.

Technical Support Analyst

- Jul 2020 - Jan 2022 ABM Water
- Facilitated the installation, operation, and maintenance of SQL-based POS systems using **Microsoft SQL Server**
 - Integrated POS systems with cloud services using **Azure**, payment gateways via secure API connections
 - Escalated complex incidents with comprehensive documentation to appropriate technical specialists using **Jira ticketing system**, ensuring swift resolution of critical issues through detailed tracking and effective communication.

PROJECTS

MSP432 ARM Cortex-M4F Configuration and Serial Communication in Keil

- September 2020 - December 2020
- Implemented a **state machine model algorithm** to configure the different LEDs on the MSP432 embedded board where each configuration corresponds to a specific state by using **embedded C** and **Assembly Language** on **FateOS**
 - Used **Keil** to develop an **algorithm in C** to arrange the various button on the MSP432 P401R micro controller in order to transition states when pressed.
 - Designed a **monitoring application** in **Python** to **communicate** with the MSP432 microcontroller via **serial port (RS232)** over the **USB** connection.

Smart Web Crawler

- September 2022 - June 2023
- Developed a system to enhance **data indexing** and **retrieval** from the internet, achieving an **85% accuracy** rate in fetching relevant search results through improved search algorithms
 - Designed and implemented the **Proxy Module** using **NodeJS** to manage user requests and ensure secure data flow, along with a **Keyword Extraction Module** in **Python** leveraging **NLTK** for accurate keyword identification from large datasets

Unity Soccer Game

- September 2022 - June 2023
- Developed a fully functional **3D** soccer game simulation using **Unity**, focusing on realistic player movements and ball physics. Utilized Unity's physics engine to simulate realistic ball dynamics, ensuring **accurate collision detection** and movement
 - Implemented **AI-controlled players** using custom scripts to simulate intelligent player behavior and decision-making on the field

EDUCATION

B.Eng in Software

Carleton University
Sept 2018 - April 2024

TECHNICAL SKILLS

Programming Languages

Embedded C </> ●●●●●●●●●●

Java ☞ ●●●●●●●●●●

Python 🐍 ●●●●●●●●●●

PHP (php) ●●●●●●●●●●

JavaScript JS ●●●●●●●●●●

Assembly Language ●●●●●●●●●●

Networking and Environments

Linux RTOS JVM UDP

TCP HTTP

Frameworks & Libraries

Django NodeJS ExpressJS

PassportJS ReactJS Bootstrap

Databases

MongoDB MySQL SQLite3

Version Control

Git GitHub Git Bash

COURSES

Object Oriented Programming

Real Time Concurrent Systems

Computer Systems Design

Computer Architecture

Real Time concurrent Systems

EXTRA CURRICULAR

Carleton Student Engineering Society (CSES)
Carleton Computer Science Society (CCSS)