Garnet Crookes

Full Stack Software Developer, M.ENG.

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Technical & Professional Skills

+ Python + TypeScript + C# + HTML/CSS + Java + C++ + SQL + ASP.NET Core
+ VueJS + React + Spring Boot + Unity + Microsoft Azure + CosmosDB + MySQL
+ REST API's + NoSQL Databases + Relational Databases + Serverless + Machine Learning

Education

University of Calgary, M.Eng Software Engineering — April 2023
Cumulative GPA — 4.0 of 4.0

University of Alberta, BSc. Mechanical Engineering, Coop with Distinction — April 2019
Cumulative GPA — 3.7 of 4.0

Work Experience

Child Friendly Care — Feb. 2023 to Present
Full Stack Software Developer — Calgary, AB

Utilized: TypeScript C# HTML/CSS VueJS ASP.NET Core Microsoft Azure CosmosDB Serverless

- Developed a web application to and integrate all functionality required to operate a daycare in a single site
- Successfully launched product in multiple day care centers, and quickly responded to customer issues
- Built integrations with Stripe, Azure B2C, QuickBooks, Rotessa for handling transactions and authentication
- Integrated automated end to end testing through Postman into CI/CD pipeline runs
- Created RESTful API using the ASP.NET Core framework deployed on serverless Azure Functions
- Utilized Microsoft Azure Cosmos NoSQL database for data storage and logging production failures
- Used Azure Dev Ops to deploy services, manage code repositories, and track issues
- Participated in daily scrum meetings and worked with stakeholders to understand priorities

MacDon Industries LTD - Capstone Industry Project — Jan. 2023 to Apr. 2023
Engineering Student — Calgary, AB

Utilized: Python C# ROS Network Unity Engine Open CV Computer Vision Control System

- Developed a vision based control system to steer simulated equipment inside of a Unity Simulation
- Created a computer vision algorithm to detect the edge between standing and cut crop using OpenCV
- Produced a control system that used the feedback from they computer vision to steer an implement
- Simulated environment in Unity and communicated with a ROS server in a separate Linux environment
- Communicated with industry sponsor to track progress and wrote a detailed technical report on solution
- Delivered report and source code to sponsor who was optimistic about result to test in the field

Work Experience

MacDon Industries LTD — Apr. 2019 to Apr. 2022
Mechanical Design Engineer — Winnipeg, MB

- Designed hydraulic and mechanical parts and systems for mobile ag equipment (Combine Draper Header)

Repsol Canada — Jan. 2018 to Aug. 2018
Student Reservior Engineer — Calgary, AB

- Supported reservoir engineering team in analyzing both conventional and unconventional assets
- Used techniques of Well testing, reservoir simulation, and DFIT analysis to analyze and forecast production

Software Projects

Movie Theater Ticket System

Utilized: *Javascript* *React* *Spring Boot* *MySQL* *REST API*

- Created a website where users can find and purchase tickets for a movie theater
- Frontend implemented using React, users can login or use the site as a guest
- Backend implemented in Spring Boot, with data stored on a MySQL database

EOG Mouse Control - NatHacks Hackathon

Utilized: *Python* *Tensorflow* *Arduino* *EXG Pills* *Multithreading* *Serial Communication*

- Created a Brain Computer Interface to control a computer mouse from EOG Data
- Captured and filtered data from multiple EXG Pill sensors on an Arduino
- Used serial communication to transmit data between Arduino and computer

AI Cupid Registration Page

Utilized: *Typescript* *VueJs* *PostgreSQL* *Supabase* *REST API*

- Created and deployed a Vue Js website to capture registrations for a dating app concept
- Saved all registrations in to a Supabase database

Course Registration Website

Utilized: *Java* *Javascript* *HTML* *CSS* *Spring Boot* *MySQL* *JPA* *REST API*

- Created a website which students could use to login, enroll in, or drop courses
- Frontend implemented with HTML/CSS/Javascript, served on the backend
- Backend implemented in Spring Boot, with data stored on a MySQL database
- Communication was done between client and server using a REST API

Decline Analysis Application

Utilized: *Python* *PyQt5* *MatPlotLib* *Numpy* *Pandas* *Pickle*

- Windows application to improve efficiency of decline analysis of oil & gas wells
- GUI allows user to interact with data and select points to fit a declinecurve to
- Implemented system to create and load save files using Pickle