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DEVANSH VAID

3A MECHATRONICS ENGINEERING – CAPTIVATED LEARNER – ASPIRING ENTREPRENEUR

LANGUAGES

C++
C
JavaScript
HTML
CSS
Arduino (C)
SQL
MATLAB (course)
Python

TOOLS

Git
AutoCAD
Xcode
Soldering
Google Analytics
BootStrap
GitHub
Terminal
SolidWorks

ONGOING VENTURES

RASPBERRY PI

Familiar with overall use and tinkering. Interested in IoT and creating connected solutions.

ARDUINO

Constructed several circuits and sub-projects with various components. Experienced with **soldering**. Familiar with Arduino language and hardware (shields, actuators).

COURSE EXPERIENCE

- Object Oriented Programming
- Oscilloscope + Multimeters
- PLC + VHDL + FPGA
- Assembly Language (8085)
- Embedded Development
- Real-time Operating Systems

EDUCATION

UNIVERSITY OF WATERLOO

Honours Mechatronics Engineering

GLENFOREST SECONDARY

International Baccalaureate
96% average
Higher Level Math and Economics

WORK EXPERIENCE

DATA ENGINEERING INTERN - RUBIKLOUD

- Generated automated **data integrity** reports against raw and transformed client data using **Python**, **SQL** and **Luigi Module**
- Developed and packaged scripts to **deduplicate** and **merge** incremental client data into Rubikloud's database with **SQL, Bash** and **AWS CLI**
- Implemented directory monitoring scripts using **systemd** on **Linux** to automatically transfer files to Amazon S3 server on availability
- Worked with **Talend Open Studio** to create **data mapping** and **ETL pipelines**

OPTIMIZATION DEVELOPMENT COOP - RAKUTEN KOBO

- Constructed complex A/B tests using the **Optimizely** platform with **JavaScript** and **CSS** to drive measurable increases in Kobo's conversions
- Created **RSpec/WATIR UI** tests to ensure proper function of web elements
- Performed analysis on A/B tests using **Google Analytics** and presented performance results to stakeholders at bi-weekly meetings

PROJECTS

IOT GARAGE DOOR OPENER - ARDUINO C (2016)

- Integrated an **ESP8266** Wifi Module to programmatically activate a garage remote through a web page, using the **Firebase** Database for communication

DUCK HUNT GAME - EMBEDDED C (2016)

- Programmed a Duck Hunt based game on the **Keil MCB1700** board while implementing **multithreading**, **semaphores** and **masking** operations.

DYNAMIC MEMORY ALLOCATION ALGORITHM RTOS - C (2016)

- Implemented a **half-fit memory management** scheme (using arrays, linked list data structures and bitwise operations) that tracks memory allocation and deallocation for a **real-time operating system**

HEXACOPTER (DRONE) - HARDWARE (2015)

- Built a custom hexacopter using an **STM32** based controller and open-source flight software. The project involved **problem solving** and **design evaluations** to optimize costs and flight duration

AUTONOMOUS GRAB AND RETRIEVE ROBOT - C++ (2014)

- Designed and programmed an autonomous **C++** robot with various sensors and peripherals (ultrasonic, touch and colour sensors) using **3D printed** components

LINE FOLLOWING ROBOT - C++ (2014)

- Programmed and debugged a **MSP430 microcontroller** based line following robot (powered by a hydrogen fuel cell) using **C++**