

MARCEL ANIS

WEB DEVELOPER

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github.com/yingyangcode

SKILLS AND ABILITIES

- JavaScript/TypeScript, NodeJS
- ReactJS, Redux, GatsbyJS, AngularJS
- Python3, Flask, SQL(PostgreSQL)
- Hyperledger Fabric
- HTML/CSS/SASS, Bootstrap
- C/C++, QML, Qt Framework
- Git, Docker, Linux
- SolidWorks

INTERNSHIPS

Frontend Developer

Axis Integrated May-Aug 2014

Developed company website
Integrated Umbraco .NET CMS solution

Web/Mobile Developer

Neuranet Sept-Dec 2013

Developed an animation timeline
Used PhoneGap for a hybrid/mobile app

Design Assistant

Calavera Surgical Jan-Apr 2013

Statistical analysis of CT scans of skulls
SolidWorks CAD design for skull implants

QA Engineer

Southpaw Inc May-Aug 2012

UI testing of asset management software
Monitor and debug customer complaints

Software Engineer

Broadridge Financial Jan-Apr 2011

Developed internal tools for employee time-tracking and product support
Designed database schema for employees

EDUCATION

BASc in Mechatronics Engineering

University of Waterloo - Waterloo, ON
Sept 2010 to Apr 2015

EMPLOYMENT HISTORY

Lead Blockchain Developer

Eastern Bank Limited - (Jan 2019 - Oct 2019)

- Automated the **verification of credit approvals** for disbursing loans, resulting in a 60% reduction of processing times for the **Credit Risk Management - Documentation and Control Unit**
- Used **Hyperledger Fabric** blockchain solution to allow third party stakeholders to upload required documents and provide collateral checks in a unified ledger verifying the customer's credit history
- Used **ReactJS** on the **front-end** for an intuitive user experience

Freelance Fullstack Developer

Webable - (Jul 2017 - Dec 2018)

- Collaborated with product managers to finalize **UI/UX** designs and **wireframes** for **marketing websites**
- Converted wireframes to web pages using **GatsbyJS** and **CSS**
- Pulled data from an internal **CMS** using **GraphQL**
- Implemented login flow with **JWT token authentication** with **Python Flask** and **PostgreSQL** on the backend

UI/UX Web Application Developer

AudienceView - (Mar 2016 - Nov 2016)

- Developed a responsive **Angular 2** app to collect and process customer donations using the **material design** UI library
- Implemented the **redux** pattern for **state management**
- Used internal **NodeJS REST API** for payment processing
- Set-up **Webpack**, **SASS** and **Jasmine** for testing

Mobile Application Developer

Pedla Consulting Group - (July 2015 - Mar 2016)

- Developed a cross-platform mobile app using **C++ Qt Framework**, allowing users to check-in to clinics and book an appointment with a doctor, reducing wait-times by 40%
- Used device **GPS coordinates** and **REST API** methods to search and display the user's nearest walk-in clinics
- Used **QML-Material UI framework** for a cross-platform app

Smart Power Transfer | Final Year Design Project

- Developed a **wireless power transfer** solution between **smart-devices** using **inductive coupling**
- Used **Arduino Uno micro-controller** to control bi-directional power transfer between devices
- Created an **Android app** allowing users to set the percentage of charge transfer from their device

Mapping and Planning | Autonomous Robotics

- Programmed a **two-wheeled robot** to navigate while avoiding obstacles using **ROS(C/C++)** in **Ubuntu**
- Utilized onboard sensors and camera for **simultaneous localization and mapping (SLAM)** for navigation
- Used **occupancy grid mapping** and **Bresenham's algorithm** for mapping and **particle filter** for localization
- Implemented **Rapidly-Exploring Random Tree (RRT) algorithm** for path planning

Autonomous Boat Project | Design Workshop

- Constructed an **autonomous boat** modeled and simulated in **SolidWorks** consisting of a **DC motor, speed controller, power regulation system** and **infra-red sensors** programmed on an **Arduino Uno micro-controller** in order to complete timed laps around a swimming pool as part of a competition

Real Time Operating Systems | Computer Structures

- Used **C-programing** to implement **inter-process** and **inter-thread** communication using **POSIX message queue** facility in **Linux** and **mailbox APIs** in **Keil uVision RTX** Real-Time Operating System
- Implemented an **operating system** in **UNIX** on the **ARM Cortex-M3** micro-controller using the **C language**

Video Player | Embedded Computer Systems

- Created a single-core **System-on-Chip (SoC)** system on the **Altera DE2 Board** to execute a sequential **MJPEG decoder** by interfacing it with the **SD card** and **VGA libraries** and playing a **video file**
- Created **hardware coprocessors** to speed-up the execution of the application and profiled the performance
- Optimized the system using a **parallelized design** instead of **sequential decoding**

Image Processing | Embedded Computer Systems

- Implemented **Average, Gaussian** and **Median filters** for **noise reduction**, **Inverse, Wiener** and **Adaptive filters** for **image restoration** and **Chroma subsampling, Discrete Cosine Transform** and **Quantization** for **image compression** in **MATLAB**

Autonomous Line Follower | Sensors and Instrumentation

- Designed an **autonomous robot** with **power regulation** by combining integrated circuit concepts that included **op-amps, signal conditioning and conversion** and **system current sensing**
- Selected and **soldered** appropriate **circuit components** and **sensors** for **PCB prototyping**
- Used **optical encoders** for **wheel calibration**, data from **light sensors** and **hall-effect sensors** to program **robot navigation** in **C** using **line detection**