Karam Danial

4A Biomedical Engineer | kdanial@uwaterloo.ca | 647-574-3693

Language: C#, Python, JavaScript, Dart/Flutter, C++, HTML/CSS, SQLite
Tools: VS Code, Android Studio, GitHub, Firebase, MATLAB, Solid Works, .Net Core, React, Adobe Eagle

EXPERIENCE

Hitplay | Software Engineer
January - April 2021

- Used **Cisco xAPI** and **RESTful API** to write macros verifying device interconnection and data in real-time. Tested these devices in corporate meeting rooms simultaneously.
- Created **AWS Lambda** functions and API Gateways to receive information posted to an endpoint and store it. Information was stored in **DynamoDB** tables and **S3 Buckets** using **Node.js Express**.
- Deployed programs for device monitoring in **SIMPL Window** and deploying them to **Crestron processors**, which report data to AWS.

E-Business Solutions | Flutter Dev
June - August 2020

- Used **Flutter SDK** and **Firebase** to program a cross-platform document management app with data-driven UI.
- Development of the app in Flutter took 3 months compared to the 7 years using Objective C. 20% decrease time to complete tasks compared to previous iteration. **Parsed XML objects** to dynamically render documents, data, and UI elements.
- Used **Firebase Auth** and **RegExr** to authorize users, store information, and manage images. Updated information across multiple platforms in real time using Streams and Asynchronous functions.
- Worked with HTML, CSS, JavaScript, and **Parse Server** to create a web text editor for writing UI elements, which are compiled and rendered in the app.

Huawei | C# Systems Engineer
September - January 2019

- Used Visual Studio and **C#** to create an **interactive GUI** used by engineers to calibrate, configure, and write to a **SerDes chip** for digital data transmission.
- **Version control** using **Apache Subversion**. Experience with Digital Signal Processing components/processes.
- Managed **asynchronous threads** in C# to graph digital register values twice as fast. Allowed testing efficiency to increase by 50%.
- Programmed low data rate configuration for SARs, TX FIRs, and clock splices to **test** digital signal fluctuation.
- Developed **unit tests** to ensure correct outputs for each MATLAB calibration file. The process involved writing to and reading from **memory registers** through bit shifting. Both hexadecimal and binary are used to identify certain memory addresses.

Baylis Medical | Hardware Engineering
January - April 2019

- Designed, created, and implemented mechanical fixtures to catalyze medical device production using **Solid Works** and **3D printing**, which decreased solder time by 40 seconds per unit.
- Modified **CAD designs** from senior engineers for over the wire and medical NRG products.
- Used knowledge of circuits to build and install **electrical testing units** which ensure correct RF generator calibration, voltage, and continuity.

Viral Labs | C# VR Developer
May - August 2018

- Used **C#** and **Blender** to create components of the arcade's VR launcher. Classes in **Unity** such as Newton VR controller were used to track user movements and laser pointers within the **VR application**.
- Spoke directly with consumers to obtain feedback about the VR launcher and made changes, which increased consumer reviews and play time.
- Coded **Excel macros** using Visual Basic to extract the number of games played, the cost of each game, and the emails of each user. This information was used to generate game recommendations, calculate company fees, and notify users of deals through automated emails.
- Used **Qt** to develop a VR pause menu to replace the original steam VR menu.
- Designed UI and advertisements for new games, customer deals, and UI's using **Adobe Illustrator** and **After Effects.**

PROJECTS | KaramDanial458

Chess Game: Functional local multiplayer chess application using React to understand how web apps are developed.
Character Matrix: Created an LED matrix scrolling through a given string using Arduino (C++). Exploring concepts such as flash memory and RAM.
Python Classifiers: Using Python and testing data, I coded three classifiers for a sorting data sets with MED, MAP, and MLE.

ABOUT ME

I'm a soon-to-be biomedical engineering graduate with great interest in software seeking a full-time position. I enjoy bringing software to life by working on interesting apps or any cool ideas in general. My main hobbies are playing guitar, reading, and gaming. I'm able to work from home or in office.