Ronald Keating

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Computer science graduate with experience developing embedded systems and applications with a strong focus on cybersecurity. I am looking for a developer position where I can grow and learn from other experienced team members.

PROJECTS

LakeNet - Capstone Design

- Implemented a stateless network broadcast protocol for LoRa communication using ESP32s. Designed a prototype node containing a temperature sensor and GPS with the ESP32 having WiFi and LoRa capabilities.
- Used C++ and FreeRTOS to create a real-time scheduler with tasks varying from packet creation, sending, receiving, and downtime.
- Used Python to listen for incoming packets over the web and port them to a MySQL database. Added web page viewing functionality as an overlay to the database.

RELATIVE COURSEWORK

Software Engineering

- Designed a 2D game within a team, practicing various software development methodologies.
- Used C# with Unity and ported the game to Windows and Android.
- Used Git as a source control.

Real-Time Operating Systems

- Used FreeRTOS and C++ to create various task architectures using ESP32s and Arduinos.
- Designed an IoT device that produced a web server to allow clients to rotate an onboard stepper motor. Communicated with an AWS cloud server using JSON commands to upload local temperature and humidity.

Malware Analysis

- Utilized numerous Linux and Windows tools to statically and dynamically analyze malware.
- Tools consisted of Ghidra and IDA Pro for reverse engineering and followed assembly instructions to understand what happens at runtime.
- Examined a real world malware, ZeroLocker, to find how it altered a given system in a controlled environment.

SKILLS

C/C++

Python

Networking

Virtual Machines

Linux, MacOS, Windows

EDUCATION

University of Idaho
B.S. in Computer Science/ Mathematics Minor

August 2017 - May 2021

Moscow ID

GPA 3.6

CERTIFICATES & EXTRA

Cybersecurity Undergraduate Academic Certificate

uCertify PenTest+ Completion

Cyber Defense Club Secretary

Some Master's Coursework