Cody Falzone

B.S. Computer Engineering

Cody Falzone
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Objective

Driven problem-solver seeking a position as a Software Engineer in order to fuel my passion for innovation.

Skills

Languages & Libraries

Proficient:

- C++ (STL, Easy Logger, Lemon)
- Python (NumPy, Flask, Alchemy, Requests, PostgreSQL, Selenium Beautiful Soup, Socket)

Familiar:

- Java
- C
- JavaScript
- SQL

Software Development

- Git/GitHub Source Control
- Travis Continuous Integration
- Scrum
- Agile Methodologies

Educational Experience

Embedded and Real-Time Systems (CS 120B, CS 122)

- Created Quadcopter using the ATMEGA 1284, with two 2-axis joysticks, 2 HC-05 Bluetooth modules, a MPU-6050 (gyroscope, accelerometer) and a Proportional Integral Derivative(PID) controller.

Networking (CS 164, CS179)

- Created a threaded multi user application using a client-server architecture in Python.
- Implemented a Multipath-TCP proxy in Python which uses both Ethernet and Wi-Fi interfaces.

Machine Learning and Data Mining (CS 171)

- Implemented ridge and logistic regression, KNN, and a 2-layer neural network with non-linear sigmoid activation functions.

Artificial Intelligence (CS 170)

- Wrote Uniform Cost and A* search algorithms, using either Manhattan or a Misplaced-Tile heuristic as a distance metric.

Intrapersonal Skills

- Ability to adapt and quickly learn new skills, languages and systems
- Strategic and creative problem solving
- Thrive in both a team and independent work environment
- Excellent communication and documentation skills/

Experience

University of California Riverside / Research Assistant
OCTOBER 2016 - PRESENT, RIVERSIDE, CA

- Developed a post processing system for microfluidics CAD designs using the seam carving technique from image processing and other techniques from graph theory. This project was implemented in C++ using Lemon and STL libraries and a suite of tests to ensure continued functionality of the sub-system.

Education

University of California, Riverside / B.S. Computer Engineering
JUNE 2015 - JUNE 2018, GPA: 3.23

Victor Valley College, Victorville / A.S. Math/Science
JUNE 2010 - JUNE 2015, GPA: 3.046

Projects

Networked Hangman

- Developed a networked hangman application in python using a client server architecture
- Socket and Thread libraries for concurrent client connections and communication

Python Web Automation

- Developed a script using Selenium and Beautiful Soup automate the process of reserving library rooms
- Google Calendar API to track reservations.

Quadcopter

- Designed and implemented a quadcopter using an Arduino UNO with an ATmega328P on board, interfacing with several peripherals.
- MPU-6050 for angular data
- PID controller
- HC-05 Bluetooth module
- Four ESC motors controlled using pulse width modulation
- Two parallax two-axis joysticks for the controller

Café Application

- Developed an Android Application for a Online Café developed in Android Studio using PostgreSQL database.
- Patron functionality included product search, creating/placing orders. Employee and Admin accounts were granted additional functionality.
- Database indexing was used to optimize SQL queries.