

Gabriel Flechas

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Education

University of Florida | Gainesville, FL

August 2019– December 2022

Bachelor of Science in Computer Science | Minor in Business Administration

GPA 3.69

Skills

Programming Languages: Java, Python, C, C#, C++, JavaScript, SQL, RISC-V

Libraries: QT Framework, Tensorflow, React, Unity, OpenCV, scikit-learn, Django

Tools: Git, Trello, CircleCI, Pivotal Tracker, Docker, Microsoft Teams, Visual Studio, bash, Quartus, Wireshark

Experience

CVS Health | Gainesville, FL

January – October 2022

Shift Supervisor

- Streamlined store operations by effectively managing inventory, ensuring efficient store closings, and delivering exceptional customer service.

Center for Safety, Simulation and Advanced Learning Technologies | Gainesville, FL

June– July 2018

Development Intern

- Developed an Android app in Unity with C# which provided simulated training in the use of ultrasound scanners.
- Collaborated with senior team members to ensure that the app was aligned with real-world ultrasound scanning techniques and training practices.
- Conducted an informal study to measure the efficacy of the developed application compared to established stimulated ultrasound training techniques.

Projects

NES Emulator

Fall 2022

Senior Capstone Project

- Worked with a three person team to develop a NES emulator using C++ with the QT framework, implementing software versions of the 6502 CPU and Picture Processing Unit present in the original console.
- Implemented reverse augmented reality features by interfacing with a JSON-based web API for in-game updates and an Arduino Uno microcontroller.

Image Recognition CNN

Spring 2022

Machine Learning Applications

- Designed architecture for a convolutional neural network using Tensorflow Keras to recognize hand-drawn digits from the MNIST database, achieving a >98.5% accuracy rate.

P2P Filesharing Application

Fall 2022

Computer Networking Applications

- Developed a peer-to-peer file sharing application in Java.
- Implemented custom network protocols for messaging and data delivery through TCP sockets.

Activities

FRC FIRST Robotics Team 3242 | Ocala, FL

November 2017 - March 2019

Programming Captain

- Led a team of students to develop operational code for a robot designed to excel at annual challenges created by the FIRST robotics organization.
- Developed a curriculum designed to teach new team members the required programming skills to contribute to the team.
- Started the team on using Git for version control and Trello for project tracking to facilitate communication and collaboration, as well as allowing for new developments without risking the integrity of the production code.
- Oversaw development of autonomous control routines for the robot using OpenCV in tandem with built-in encoders and gyroscopic sensors.