

ANDY HOLM

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Education

Florida Gulf Coast University | Fort Myers, FL | Expected in 05/2024

Bachelor of Science: Software Engineering

Summary

I am a senior in the Software Engineering program at Florida Gulf Coast University. My interests are in ML/AI, data analytics, and software development. I have experience in web development, database, and embedded programming. I have experience with data visualization tools such as Tableau and Power BI. I love learning and being a beginner. I am deeply curious about how things work regardless of the context and enjoy new challenges. I look forward to contributing to the development of innovative software solutions.

Skills

- Data Analysis
- Data Visualization
- Machine Learning
- Federated Learning
- TensorFlow / Keras
- Tableau
- Power BI
- Microcontrollers
- C++
- Python
- SQL
- JavaScript / CSS
- Git
- Microsoft Office

Experience

WISER Research Assistant | Florida Gulf Coast University - Fort Myers, FL | 08/2023 - Current

- Developing federated learning architecture for applications of AI solutions to health problems such as image analysis
- Researching most recent development's in federated learning as it applies to healthcare
- Collaborating with In.lab InovaHC Faculdade de Medicina da Universidade de São Paulo (FMUSP) to document and create novel approaches of federated learning and AI in healthcare
- Work under Dr. Leandro De Castro to write and publish research

Undergraduate Research Assistant | Florida Gulf Coast University - Fort Myers, Florida | 02/2023 - 09/2023

- Implemented machine learning and deep learning applications on edge devices using sensor data
- Collected and analysis data using Arduino and other microcontrollers to train neural networks
- Wrote programs to process and classify real-time data using machine learning
- Learned microcontroller architecture included multiple Arduino and ESP boards

Teaching Assistant | Florida Gulf Coast University - Fort Myers, FL | 08/2022 - 12/2022

- Taught introductory C++ and programming best practices
- Helped students by offering different perspectives on learning approaches
- Held office hours outside of class for student help
- Gained deeper knowledge of fundamental coding principles

- Act as an extension of upper management to coordinate events and ensure excellent service
- Lead one of the busiest valet locations in the country in one of the most affluent areas
- Train and mentor new hires
- Lead small teams at private events

Projects

Binary Movement Classification

- Collected data using an accelerometer on an Arduino Nano consisting of two different movements and used the data to train a TensorFlow binary classification
- Created a TensorFlow Lite model to be uploaded onto the Arduino Nano through the Arduino IDE
- Ran inference in real time using the TensorFlow model on the Arduino Nano and live acceleration readings to calculate if the acceleration being experienced was one of two different swiping patterns

Senior Project

- Used ESP32 microcontrollers and different sensors to gather realtime data relating to different environmental factors such as humidity, wind speed and acceleration among others
- Gathered wireless data transmissions from the microcontroller to an AWS hosted InfluxDB database
- Visualized and analyzed the data using a database created with Grafana to draw insights from live sensor readings
- Deployed sensors in different locations to be used for different applications such as storm probes or remote structural monitors

Websites

- <https://github.com/AndrewHolm>
- <https://www.linkedin.com/in/andrew-holm-0081031a8/>