Adrian Osorio Blanchard

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EDUCATION

University of Central Florida

Orlando, FL

Bachelor of Science in Computer Science

Dec. 2026

EXPERIENCE

Undergraduate Researcher

Aug. 2024 – Present

U.N.A.R.YLab

Orlando, FL

- Collaborated with a team of 8 researchers, under the mentorship of a Ph.D. professor, to design and develop a energy efficient unary Brain-Computer Interface (BCI) to process and filter brain signals for various tasks.
- Built an **EEG** data processing pipeline, links a custom large language model with **LangChain** to classify signals.
- Parsed EEG signals using custom Brain Image Data Structure parser to extract metadata for classification.
- Conducted and wrote unit tests on different LLMs like Llama 3.1 to verify accuracy classification of EEG signals.

Hackathon Organizer

Dec. 2024 - Present

Knight Hacks

Orlando, FL

- Organized and overseeing logistics of Knight Hacks VIII, including workshops, activities and ceremonies.
- Secured sponsorships from companies and, developing long-term relationships with corporate partners.
- Prepared post-event reports detailing metrics such as participant satisfaction, event statistics, and reports.

Operations Team

Aug. 2023 - Present

Knight Hacks

Orlando, FL

- Coordinated club meetings for **500+** members, supported officers with operational strategies and planning.
- Promoted the club during tabling events to help recruit new members and encourage event participation.
- Supported event photography to capture member interactions, key moments, and document important activities.

Projects

BCI | Python, TensorFlow, LLM, LangChain, Anaconda

Fall 2024

- Engineered a **real-time** EEG signal classification pipeline, integrating a custom parser to extract metadata from input files and pass data into a custom large language model (**LLM**) for verification and classification.
- Collaborated with a team of 8 to optimize pipeline performance and data flow in high-volume environments.
- Performed unit testing using 150 different datasets from Temple University to ensure proper classification.

SpoilerAlert | JavaScript, Node.js, Express.js, MongoDB, React

Fall 2024

- Developed a Chrome extension blocking movie spoilers, using a custom API using data from 600,000+ movies.
- Built a Node.js server to handle 10,000 requests daily to manage movie data, using Express.js as middleware.
- Presented SpoilerAlert to judges, delivering a live demo and the project's features, impact, and future goals.

Kanto Pokédex | Java, Spring Boot, Maven, MongoDB, React, Bootstrap, CSS

Spring 2024

- Developed a full-stack web application, to manage Pokémon data, built RESTful APIs using 151+ Pokémon.
- Modeled Pokémon data using object-oriented principles and managed Pokémon data with MongoDB.
- Implemented an interactive front-end using **React**, **Bootstrap**, and **CSS** to display and compare Pokémon.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, JavaScript, TypeScript, HTML, CSS, Bash

Frameworks: React, Node.js, Three.js, Next.js, Bootstrap, Maven, Tailwind CSS, Express.js

Tools: Git, GitHub, MongoDB, Docker, AWS, Hugging Face, LangChain, Figma, Blender, Anaconda

Libraries: Pandas, NumPy, PyTorch, TensorFlow, OpenCV

CERTIFICATIONS

Amazon Web Services Virtual