Adrian Osorio Blanchard

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EDUCATION

University of Central Florida — Orlando, FL
Bachelor of Science in Computer Science — *Dec. 2026*

EXPERIENCE

Undergraduate Research Assistant — Aug. 2024 – Present
U.N.A.R.Y Lab — *Orlando, FL*

- Collaborated with a team of **8** researchers, under the mentorship of a Ph.D. professor, to design and develop a efficient unary Brain-Computer Interface (**BCI**). Utilizing **machine learning models** to interpret brain signals.
- 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.

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* — Fall 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.

EXTRACURRICULARS

KnightHacks | *Operations team* — August 2023 - Present

- Coordinating club meetings for **500+** members, supporting officers with operational strategies and planning.
- Promoting the club during tabling events to help recruit new members and encourage them to participate.
- Supporting event photography to capture member interactions, key moments, and document important activities.

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

CERTIFICATION

AWS Academy — Fall 2024
Cloud Security Foundations, Cloud Foundations — *Virtual*