Adrian Osorio Blanchard

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EDUCATION

University of Central Florida   Orlando, FL
Bachelor of Science in Computer Science   *Dec. 2026*
Coursework: Data Structures, Mobile Development, Game Development, Discrete Structures, Cyber Security

EXPERIENCE

Undergraduate Researcher   Aug. 2024 – Present
U.N.A.R.Y Lab   *Orlando, FL*
- Collaborated with a team of **9** researchers, under the mentorship of a Ph.D. professor, to design and develop a energy efficient unary **Brain-Computer Interface** 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 **60,000+ EEG** signals using a custom **Brain Image Data Structure** parser to extract metadata.
- Conducted and wrote **30** unit tests on **4+** large language models to verify accuracy and improve performance.

Treasurer   Jan. 2025 - Present
Knight Hacks   *Orlando, FL*
- Led **50+** students across multiple teams to gain sponsorships, manage expenses, and optimize resource allocation.
- Worked with a team of **13** to raise an estimated **$40,000+** for the hackathon by networking with companies.
- Managed budgeting, fundraising, and expenses to help support **20+** students attending Bitcamp XI.

Hackathon Organizer   Dec. 2024 - Jan. 2025
Knight Hacks   *Orlando, FL*
- Planned **Knight Hacks VIII** logistics and participant outreach, handled post-event reports to analyze metrics such as participant satisfaction, engaging with **500+** attendees for UCF's **largest** software RSO.
- Designed promotional materials, including tabling items, business cards, and banners to enhance club presence.
- Collaborated with the Cognitive Sciences Lab (**CSL**), providing assistance with hackathon planning for research.
- Assisted software development, design, and outreach teams to ensure smooth workflows, and successful projects.

PROJECTS

Kmodo | *TypeScript, Next.js, React, Tailwind CSS, tRPC, Drizzle, PostgreSQL*   Dec. 2024 - Present
- Designed a scalable hackathon management system with role-based access and real-time event organization.
- Developed a seamless user experience with TypeScript, Next.js, and React, maximizing **CSR** and responsiveness.
- Integrated **tRPC APIs** for user functionality and facilitated back-end communication between client and server.
- Self-hosted a server on a **Linux VPS** with a **CI/CD** script for constant deployment, uptime, and extensibility.

SpoilerAlert | *JavaScript, Node.js, Express.js, MongoDB, React*   Oct. 2024
- Made a Chrome extension blocking movie spoilers, using a **RESTful 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.
- Populated a **MongoDB** database with data, implementing **CRUD** operations and enabling daily updates.

Kanto Pokédex | *Java, Spring Boot, Maven, MongoDB, React, Bootstrap, CSS*   June 2024
- Developed a full-stack web application, to manage database data, built **RESTful APIs** using **151+** objects.
- Modeled object data using **object-oriented principles** and managed database data with **MongoDB**.
- Implemented an interactive front-end using **React**, **Bootstrap**, and **CSS** to display and compare Pokémon.

TECHNICAL SKILLS

Languages: Java, Python, C#, TypeScript, C++, JavaScript, C, HTML, CSS, Bash
Frameworks/Libraries: NumPy, PyTorch, TensorFlow, React, Node.js, Three.js, Next.js, Bootstrap, Maven, Tailwind, Express.js, Unity, Pandas, NextAuth, OpenCV
Tools: Git, GitHub, MongoDB, Docker, AWS, Hugging Face, LangChain, Figma, Drizzle, Postgresql, Coolify, Blender
Concepts: Object-Oriented Programming (OOP), Machine Learning, Web Development, RESTful APIs, Cloud Computing, Data Structures and Algorithms, Version Data Analytics, Test-Driven Development (TDD)