Carlos Catala

carlos@catala.dev | linkedin.com/in/cataladev | github.com/cataladev | catala.dev

EDUCATION

University of Central Florida May 2028
Bachelor of Science in Computer Science | GPA: 3.7 *Orlando, FL*
Organizations and Affiliations: ColorStack, Society of Hispanic Engineers, KnightHacks
Relevant Coursework: Programming in C, Discrete Math, Data Structures and Algorithms, Calculus

EXPERIENCE

Software Engineering Intern Jun 2024 – Aug 2024
Crowning Games *Dallas, TX*
- Developed new characters for an RPG game, enhancing user experience and receiving positive feedback from **75** players during open-play testing.
- Led weekly **SCRUM** implementation for team task coordination, resulting in **90%** on-time project deliveries and **35%** increase in team productivity.
- Optimized game performance, reducing load times by **30%** and improving rendering for smoother gameplay.

Software Engineering Intern Jun 2023 – Aug 2023
Miami EdTech *Miami, FL*
- Led a **4-developer** team researching STEM education kit integration in under-served schools, producing a comprehensive report that informed a proposed outreach program targeting **500+** students.
- Improved the effectiveness of a facial image classifier by increasing the precision by **20%** and recall by **10%**.
- Developed user-friendly guides to help students and teachers understand and utilize STEM education kits more effectively.

Software Engineering Intern Jun 2022 – Aug 2022
AvatarBuddy AI *Miami, FL*
- Implemented bilingual detection and response capabilities in **AI chatbot**, contributing to a **15%** increase in user satisfaction and interaction quality as measured by user surveys.
- Increased PyTest unit test coverage by **15%** for a chatbot with multilingual support. Developed E2E and integration testing to catch several logical bugs.
- Refactored parts of the chat-bot backend, improving API response times and making the system more efficient for handling user requests.

PROJECTS

Riffs | *React, Tailwind, TypeScript, Pitchy* April 2025 – April 2025
- Created a web app that transforms hummed melodies into guitar tabs, allowing users to edit riffs with a Guitar Hero-style interface.
- Used **Pitchy** and **FL Studio** to analyze pitch and enable interactive tab editing, improving accessibility for beginner musicians.

kmodo.org | *Typescript, Next Auth, Drizzle, Postgresql, Tailwind, React* Jan 2025 – May 2025
- Built a full-stack hackathon management tool using **Next.js** and **PostgreSQL** to streamline event coordination for **100+** users.
- Deployed to a **Linux VPS** with CI/CD and custom domain, ensuring **99.99%** up-time and scalability for future expansion.

SightSync | *Python, OpenCV, Mediapipe, PyAutoGUI, SpeechRecognition, Tkinter* March 2025 – March 2025
- Engineered an assistive desktop tool using **eye tracking** and **voice commands** to help users with mobility impairments control their computers.
- Integrated **Mediapipe** and **OpenCV** to achieve smooth real-time cursor movement and responsive speech control.

TECHNICAL SKILLS

Languages: Python, Java, TypeScript, JavaScript, C#, C, C++, HTML, CSS
Libraries/Frameworks: React, Tailwind CSS, tRPC, Next.js, Node.js, Selenium, OpenCV, Mediapipe, PyAutoGUI
Developer Tools: Git, Unity, Prisma, Vercel, Docker, Postgresql, Coolify, Godot, IntelliJ, VS Code, Supabase, PyAudio