Angelo Ortiz Vega.

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PROFESSIONAL PROFILE

Software Engineer with over four years of experience developing scalable and efficient digital products for startups and organizations, combining technical expertise with strong problem-solving skills, business insight, and user-centered design. Skilled in Python development with frameworks such as Flask and FastAPI, cloud integrations with AWS, and modern full stack technologies including React, Angular, and Nodejs. Currently completing a degree in Computer Engineering at the Technological Institute of Costa Rica, reinforcing a solid theoretical and analytical foundation. In parallel, I have worked as a university lecturer for 3+ years, teaching Artificial Intelligence, Data Analysis, Full Stack Development, and UX Design, with a focus on practical and real-world applications. ***Keywords: Computer Engineer, AI & Data, Full Stack Development, Python (Flask/FastAPI), AWS, University Lecturer.***

WORK EXPERIENCE

Software Engineer   **Self Employed /** Various Clients   **Jun 2020 - May 2024**

Delivered end-to-end software solutions for startups and diverse clients, combining robust backend development, cloud integration, process automation, and frontend development. Focused on building scalable, maintainable, and efficient systems using modern technologies and best engineering practices.

- **Python Development (4+ years):** Designed and implemented backend systems and REST APIs using Flask and FastAPI, including unit and functional testing
- **Cloud & DevOps (1–2 years):** Integrated applications with AWS services (S3, EC2, Lambda); configured CI/CD pipelines with Docker and GitHub Actions.
- **Full Stack Development:** Built web dashboards, mobile apps (React, React Native), and database solutions (PostgreSQL, MongoDB).

Full Stack Developer – Qubo Systems *(Contractor)*

- Developed backend and frontend components for internal tools, including REST APIs and admin dashboards.
- Implemented Machine Learning models for salary classification, integrating data pipelines and analytics results into the system.
- Managed AWS deployments, including service orchestration, S3 storage, and Lambda functions for task automation.

Mobile & Web Developer – EasyHop *(Contractor)*

- Started working on the driver mobile app (React Native), developing critical features for driver experience.
- Led a UX research initiative, resulting in strategic decisions to invest in the web-based driver app (React) to optimize revenue and efficiency.
- Developed a Python-based web scraping system to automatically gather external market data for analysis and product decisions.

Other freelance work

- Built multiple custom websites and dashboards in Angular for clients across various industries, integrating databases and APIs.
- Developed Python automation tools, including automated reporting, data migration between systems, and internal operations scripts.

University Lecturer   **Universidad Creativa de Costa Rica**   **Apr 2022 - Present**

Developed and delivered courses for the Advanced Technical Certificate in *Artificial Intelligence*, Advanced Technical Certificate in *Full Stack Web Development*, *Data Science* Certification, and the *UX Design* Certification, creating well-rounded programs that connect foundational theory with practical, real-world use cases. Key Contributions:

▪ Enriched the learning experience by incorporating real-world case studies, collaborative projects, and innovative teaching methodologies.
▪ Mentored students in the development of capstone projects and functional prototypes aligned with current industry practices.
▪ Delivered courses in *Python for AI, Applied AI, and Machine Learning & Deep Learning*, with emphasis on backend development, API creation, and deployment on AWS cloud services.
▪ Structured and authored the complete UX Design Certification program, including courses such as *Research for Digital Experiences, Solution Ideation, Design Principles, and Interaction & Usability*.

PERSONAL PROJECTS

TopspinAI – Real-time Table Tennis Analytics Platform (Python, OpenCV, AWS) | Jan 2024 – Nov 2024

Developed an end-to-end analytics platform for table tennis, combining computer vision, machine learning, and cloud integration to analyze matches in real time. Designed with scalability and performance in mind, the system supports player training, coaching, and data-driven match insights.

● **Computer Vision & ML:** Implemented ball detection and tracking using **OpenCV and PyTorch**, achieving >96% accuracy on custom datasets. Built semantic segmentation models to detect the table, players, and scoreboard.
● **Event Detection:** Engineered algorithms to recognize key match events (bounces, serves, scoring), integrating encoder–decoder feature maps for real-time analysis.
● **Backend & Cloud Integration:** Designed microservices with FastAPI, integrated video storage/processing pipelines with AWS S3 and Lambda, and optimized workloads with hardware acceleration.
● **Frontend & Visualization:** Built interactive dashboards with React, enabling coaches and players to visualize trajectories, statistics, and match breakdowns.
● **System Architecture**: Designed a modular, scalable architecture from scratch, ensuring efficient processing of both high-definition frames and cropped detection windows.

Demo: **TopspinAI ppt - Figma**

OTHER NOTEWORTHY PROJECTS

- **angelortizv.com**   Personal blog exploring life, technology, UX, and AI.
- **angelortizv.me**   Online portfolio showcasing selected freelance and academic work.
- **ux-arc**   Curated knowledge base for UX topics.
- **ce-itcr**   Collection of academic projects completed during my CE studies.
- **Space Invaders Clone** A Space Invaders clone written in Python with PyGame.

ACADEMIC TRAINING

Licenciatura de Ingeniería en Computadores Instituto Tecnológico de Costa Rica
(Currently completing the final course to obtain the degree.)
Técnico Medio en Electrónica Industrial Colegio Técnico Profesional de Dulce Nombre
Bachillerato en Educación Media Colegio Técnico Profesional de Dulce Nombre

CERTIFICATIONS

IBM AI Developer Coursera & IBM
Python Essentials 1 & 2 Coursera & Cisco Networking Academy
Professional Development Program (PDP) Centro Universitario Miravalles
Scrum Foundation Professional Certification - SFPC CertiProf International
Full Stack Web and Multiplatform Development Coursera & The Hong Kong University
Google IT Automation with Python Coursera & Google, LLC
Google IT Support Professional Certificate Coursera & Google, LLC