

# CARLOS ALBERTO VILLA HERRERA

**Full-Stack AI Engineer | Serverless AWS | Computer Vision | Cloud Infrastructure**

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[codefoliocavilla.replit.app](https://codefoliocavilla.replit.app)

## PROFESSIONAL SUMMARY

Backend-first Full-Stack AI Engineer with production experience building AI video analytics, real-time event processing, OCR services, and scalable AWS cloud infrastructure. Strong in Python, serverless architecture, operational reliability, data analysis, and applied research. Uses AI-assisted engineering workflows with OpenAI Codex and Claude Code to accelerate design, implementation, debugging, code review, documentation, and delivery while maintaining production-quality standards.

## CORE SKILLS

Python, AI Engineering, Backend Development, Full-Stack Development, REST APIs, Event-Driven Architecture • AWS Lambda, DynamoDB, SQS, S3, CloudWatch, Serverless Architecture, Docker, CI/CD, Terraform, IaC • Computer Vision, OCR, Video Analytics, Real-Time Processing, Data Pipelines, Applied AI, AI Agents • Production Debugging, Observability, PR Reviews, Technical Documentation, Moodle/LMS, Statistical Analysis • AI-Assisted Development: OpenAI Codex, Claude Code, prompt-driven refactoring, test generation, architecture exploration

## RELEVANT EXPERIENCE

**Creai | Full-Stack AI Engineer** — Oct 2024 - Present | Mexico

- Build and operate backend services and cloud infrastructure for AI video analytics and real-time computer vision applications.
- Design serverless AWS architectures using Lambda, DynamoDB, SQS, S3, and CloudWatch; support Dockerized workloads, CI/CD, and operational reliability.
- Develop Python services for event processing, OCR integration, and AI pipelines; contribute to architecture decisions, pull request reviews, debugging, and Terraform-based infrastructure as code.
- Leverage OpenAI Codex and Claude Code for high-velocity software delivery, including code generation, refactoring, test planning, documentation, debugging, and architecture validation.

**Universidad Autonoma de Chihuahua | English Program Coordinator and Professor** — Aug 2015 - Present | Chihuahua, Mexico

- Lead curriculum planning, faculty coordination, academic operations, and technology adoption across English programs.
- Design and deliver courses in English, programming, and technology-supported learning; build digital content in Moodle and provide web/LMS support.
- Drive AI-assisted course development and digital learning initiatives, connecting educational technology, documentation, and measurable student outcomes.

**The University of Texas at El Paso | Graduate Research and Teaching Assistant** — Sep 2018 - Dec 2020 | El Paso, TX

- Supported research projects through data collection, structured database management, statistical analysis, academic instruction, and research documentation.

## EDUCATION

B.S. in Software Engineering, Universidad Autonoma de Chihuahua, 2025 - 2028 (in progress)

M.A. in Political Science, The University of Texas at El Paso, 2018 - 2020

M.A. in Administration, Universidad Autonoma de Chihuahua, 2013 - 2016

B.A. in Government Administration, Universidad Autónoma de Chihuahua, 2008 - 2013

## CERTIFICATIONS AND LANGUAGES

Certifications: Computer Science for Artificial Intelligence; CS50 Web Programming with Python and JavaScript; Computer Science for Cybersecurity; Introduction to Cybersecurity. Languages: Spanish and English.