# CARLOS QUIHUIS

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## EDUCATION

**Arizona State University** **Aug 2020 - May 2025**
*Bachelor of Science, Computer Science*

- **Coursework:** Data Structures and Algorithms, Operating Systems, Machine Learning, Natural Language Processing, Computer & Network Forensics, Distributed Systems, Information Assurance, Web Development with Java, Embedded Microprocessor Systems

## PUBLISHED RESEARCH

- Co-author.XR for Educational Anatomy: an Immersive human atlas with chatbot.University of Paris & UNESCO, XR4Health25 (2025). Presented a VR/AR system for medical imaging education.
  https://www.researchgate.net/publication/391125680_XR_for_educational_anatomy_an_Immersive_human_atlas_with_chatbot

## TECHNICAL SKILLS

- **Programming Languages:** Python (pandas, NumPy, Matplotlib, scikit-learn, PyTorch, Pydicom), Java, C/C++, Assembly, JavaScript, TypeScript
- **Developer Tools:** Git, Docker, Linux/Unix, Bitbucket, AWS, Spacelift, Postman, Apache Kafka, Unity, Kubernetes, .NET, Linux Kernel, Bash, CI/CD, React, Angular
- **Databases:** SQL (MySQL, PostgreSQL), MongoDB, Vector Databases (Qdrant, Chroma), AWS Aurora

## EXPERIENCE

**Wise Project LLC** **Oct 2025 - Present**
*Software Developer* *Los Angeles, CA*

- Built the company's full platform (React + TypeScript) to digitize property listings and tenant workflows, reducing manual processing by ~80%.
- Developed an AI tenant assistant (Gemini + RAG) that delivers near-perfect property Q&A and auto-prequalifies applicants, reducing redundant calls.
- Implemented a Python/Django + Stripe backend to automate recurring rent payments and reduce billing errors.
- Built a React Native mobile app for tenants to pay rent and submit maintenance requests, eliminating the need of intermediary actions.

**University of Phoenix | Online University** **May 2025 - Aug 2025**
*Software Engineering Intern* *Tempe, AZ, USA*

- Built a pull request agent (Python, AWS Lambda, Bitbucket API, LangChain, Qdrant) that analyzed code changes and suggested inline fixes, enabling tech leads to catch logic errors and coding mistakes in ~10 seconds.
- Enhanced the system with a Python RAG (Retrieval Augmented Generation) pipeline to detect cross-file impacts, improving the accuracy of code analysis
- Implemented Amazon SQS async pipelines to resolve webhook timeouts, reducing CI/CD (Continuous Integration/Continuous Deployment) delays by ~30 seconds.
- Designed and deployed a Kafka-based microservice in Java on AWS (S3 + Lambda) to audit 100+ access keys, uncovering 62 orphaned policies and 30 missing team entries, and driving company-wide adoption for security compliance.
- Led incident response during Cognito/credentials deprecations, implemented 2 new security measures and eliminated system downtime.

**City of Phoenix | Water Services Department** **Sep 2024 - Apr 2025**
*Software Engineering Intern* *Phoenix, AZ, USA*

- Optimized SQL queries and restructured database schemas using Python and sqlalchemy library, reducing asset lookup times from minutes to under 5 seconds while supporting a large-scale government database migration with zero downtime.
- Increased asset identification output by 3x by redesigning indexing and tagging workflows used across field and office teams.
- Consolidated 200+ engineering, maintenance, and compliance documents into a unified, cross-linked knowledge system, reducing retrieval time from hours to under one minute.
- Supported implementation of standardized asset-naming conventions and metadata structures to improve long-term traceability and operational planning.
- Collaborated with engineers and analysts to validate asset data quality, streamline update cycles, and reduce redundant records.

## ENTREPRENEURIAL EXPERIENCE

**Healthy Medical AI** | *Full-stack AI Engineer* **Hermosillo, Mexico Jun 2023 - Present**

- Led the development of a unified healthcare platform now used across public hospitals in Hermosillo, Mexico. Centralizing complete patient health records, lab reports, and imaging (mri, CT-Scan) through a single interface built on Python architecture and React + Typescript frontend.
- Integrated AI tools (Python U-Net + Openai api) to detect, classify, and segment brain tumors in medical images. Achieved 88.9% accuracy while making anomalies clearly visible across multiple scan layers.
- Leveraged our Neural Network metadata and LLM to interpret textual reports alongside the imaging results, providing multimodal diagnostic insights.
- Deployed on AWS with HIPAA-compliant architecture, following engineering standards, CI/CD pipelines, and security best practices to ensure scalability and reliability.
- Conducted 100+ pilot tests with physicians, incorporating their feedback to fine tune usability, workflows, and accuracy.

**Chmltech Ltd.** | *AI Engineer* **Aug 2024 - Apr 2025**

- Designed a mixture-of-agents architecture with Python and Google's Generative AI Gemini, where a supervising agent coordinated multiple specialized agents through structured prompts. (independently, before tools like LangChain)
- Built a custom multimodal pipeline combining MRI imaging and patient records, enabling richer pre-diagnostic support for doctors.
- Leveraged Python (PyTorch, Pydicom) models to classify brain tumors and extract relevant medical features.
- Deployed a prototype medical assistant capable of providing AI-powered insights from both imaging and textual medical data, laying the groundwork for future clinical testing.