# Justin Gutierrez

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## EDUCATION

**San Jose State University**                                    Aug 2024 - May 2027
*B.S. in Computer Science*                                              *San Jose, CA*

- **Relevant Coursework:** Intro to Data Structures and Algorithms, Discrete Math, Calculus 2, (In Progress) Linear Alegbra, Intro to x86 Assembly Language and Computer Architecture

## WORK EXPERIENCE

**Machine Learning Researcher**                                  Sep 2024 - Apr 2025
*SJSU College of Engineering*                                              *San Jose*

- Developed machine learning models under the Guidance of Dr. Saxena to predict type 2 diabetes using physiological data from the Pima Indians Diabetes Dataset.
- Achieved highest accuracy of 80.52% with Logistic Regression after hyperparameter tuning with GridSearchCV.
- Preprocessed and analyzed data using Python (Pandas, Scikit-learn) in Google Colab.
- Proposed future improvements involving deep learning and diverse patient datasets.

**College Corps Fellow**                                         Jun 2025 - Present
*College Corps of America*                                              *San Jose, CA*

- Incoming 2025 College Corps Fellow
- In association with SJSU and #CaliforniansForAll state program

## TECHNICAL PROJECTS

**TerraScope** ⧉ | *React, Tailwind, Deck.gl, FastAPI, Supabase, Machine Learning, Docker*          June 2025

- Developed a full-stack AI web app submitted to the 2025 Berkeley AI Hackathon
- Integrated multi-spectral satellite imagery and Google Earth Engine for real-time geospatial insights
- Built custom AI agents using Claude API and Dockerized Fetch.ai for automated terrain analysis and risk alerting

**Full Stack Freelance Website** � | *JavaScript, TypeScript, Tailwind, Firebase, React*          Present

- Developing a full-stack photography portfolio website with dynamic collection management, real-time booking system, and automated Google Calendar/Zoom integration for professional photographers
- Implemented WebP image optimization and compression that reduced Firebase Storage usage by 99% while maintaining image quality, significantly cutting cloud storage costs and improving page load speeds
- Built comprehensive SEO optimization system with dynamic metadata generation, structured data markup, and automated sitemap creation, resulting in improved search engine visibility and social media sharing capabilities

**LLMContext** � | *Python, Typer, FastAPI, Ollama (Mistral), OpenAI API, ChromaDB*          Present

- Built a universal sidecar + CLI tool that detects frameworks in a codebase, downloads their documentation, and compresses into LLM-optimized context for AI agents via API, semantic search or file system
- Implemented a full documentation processing pipeline including chunking, summarization with Ollama or GPT-4, embedding with ChromaDB, and real time context retrieval through natural language or tool/topic queries
- Established extensible architecture to support IDE plugins, MCP/agent integration, and internal doc ingestion, for scalable and pluggable context delivery for Copilot, Cursor, etc.

## VOLUNTEER EXPERIENCE

**CodeClimbers**                                                 Aug 2022 - Jul 2024
*Teacher/Founder*                                                      *Sacramento, CA*

- Developed and taught an engaging python programming curriculum to 25+ local middle school students
- Hosted after school class sessions at the Natomas Public Library to students free of charge
- Led technology support classes at a local eskaton retirement facility