

ALFREDO SANTOS III

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SUMMARY

Innovative and detail-oriented software developer with hands-on experience in Python, Flask, FastAPI, and IoT solutions. Skilled in designing and deploying real-time applications, integrating machine learning models, and managing cloud-based systems. Passionate about building scalable, efficient, and intelligent solutions, with a strong focus on data-driven decision-making and continuous learning. Adept at turning complex problems into practical, user-friendly solutions.

TECHNICAL SKILLS

- **Core Development:** Python (Strong), Java, SQL, NoSQL.
- **Backend Frameworks:** FastAPI, Flask, Django, RESTful APIs, WebSockets, SocketIO.
- **AI/ML & Automation:** RAG Pipelines, LangChain, Google Gemini SDK, HuggingFace, Grok, Pinecone Vector DB, Computer Vision (YOLO), N8N.
- **Cloud & DevOps:** AWS, Google Cloud Platform, Docker, Render, Supabase, Cloudflare.
- **IoT Systems:** Raspberry Pi, Arduino, ESP32, Real-time Sensor Data Processing.
- **Databases:** SQL, PostgreSQL, Firebase, Supabase, MySQL, Pinecone vector database
- **Other Tools:** Git, Github, Postman, Docker, DBeaver, GoogleColab, Anaconda, VSCode

EDUCATION

Bachelor of Science in Computer Engineering

STI College Caloocan

June 2022 - April 2026

JAVA NCIII

Technical Education and Skills Development Authority

Oct 2024- Dec 2024

PROJECTS

- **AquaCare - Smart Aquarium Monitoring System**

Built an IoT system for real-time monitoring of pH, temperature, and turbidity with automated alerts, automatic feeding, live camera and scalable backend support. Enhanced by AI and ML predictions.

Tech: Python, FastAPI, RaspBerryPi, Firebase, REST API, Gemini AI, ML Random Forest, Supabase

- **PawPal - AI Smart Pet Care System**

Created an AI-powered pet care system with automated feeding and computer vision-based activity monitoring.

Tech: Python, FastAPI, Firebase, YOLO

- **Portfolio**

Built a RAG-based AI system with a FastAPI backend on AWS Elastic Beanstalk, Pinecone vector database, and a responsive HTML/CSS/JS frontend.

Tech: Python, FastAPI, Pinecone, AWS Elastic Beanstalk, Vercel

See more projects at: <https://profile.alfreds.dev>