

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

- Programming & Backend Development:
Python, Flask, FastAPI, Django, Java, OOP
- Web & APIs:
REST API, WebSocket, Socket IO, API Integration
- IoT & Hardware:
Sensor data acquisition, automation systems, Arduino, Raspberry Pi, real-time monitoring and control
- Cloud & Deployment:
Render deployment, AWS, Google Cloud Platform, Railway, Cloudflare DNS and domain configuration
- Machine Learning & AI:
Machine learning model integration, AI SDK(Gemini, HuggingFace, Grok), data analysis, prediction systems
- 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