Neil Artus

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EDUCATION - De La Salle University - Dasmariñas

Bachelor of Science in Computer Science with Specialization in Intelligent Systems
- **Consistent Dean's Lister** (2022-2025)
- **Relevant Coursework:** Object-Oriented Programming, Data Structures and Algorithms, Machine Learning, Databases, Web Development
- **Extra-Curriculars:** Secretary - Computer Science Program Council

EXPERIENCE

JG Summit Holdings Inc. - GenAI Research Intern   2025
- Developed and deployed a full-stack generative AI web application with seamless data pipelines for internal use
- Collaborated with an Agile team to iterate and produce a working proof of concept in a fast-paced environment
- Conducted rigorous analysis of model accuracy to ensure alignment with business requirements.
- Engineered a modular application architecture to improve maintainability and simplify the team turnover process.
- Reduced future development time by writing comprehensive documentation and conducting knowledge transfer sessions.

Freelance Software Developer   2025
- Presented at LPU - Cavite Innovex 2025 Colloquium and awarded COESCA research of the year
- Coordinated with a non-technical team to train a Convolutional Neural Network based on MobileNet architecture using Tensorflow for osteoarthritis detection.
- Wrote a Python script to run inference on a Raspberry Pi 5 connected to a thermal camera.

Skills

Languages: Python, Javascript,
Frameworks: React, Tailwind, Flask, FastAPI, LangChain, Tensorflow, Pandas, PyTorch
Cloud Tools: Azure (App Service, CosmosDB, OpenAI), GCP (VertexAI, Gemini SDK, Firebase), Vercel, Hetzner, Pinecone

Completed Projects

MediSeen (*Capstone Project*)
- Led a team using PyTorch to develop an AI-powered progressive web application providing clinical decision support
- Engineered a microservice architecture using industry-standard cloud tools on Azure and GCP, which enabled an average response latency of 98 ms for database queries, and average response latency of 2000 ms for AI tasks
- Developed a responsive viewport for mobile using React and Tailwind; increased system usability score by 15%.
- Implemented security features by using FastAPI and routing traffic to a Cloudflare DNS Tunnel.

Neural Networks from Scratch
- Built fundamental machine learning algorithms from scratch using JAX; matched the accuracy of existing Python AI frameworks
- Implemented functional programming techniques to enable jit-compiled performance benefits to certain computations, while wrapping the core logic in an OOP wrapper for better developer experience

Formal Language Compiler
- Built a web compiler using Flask and Javascript for visualizing deterministic formal languages.
- Wrote the core algorithm in Python to accurately simulate Deterministic Finite Automata, processing input strings against complex state transition tables.
- Ensured code coverage by using pytest to ensure reproducibility and that the compiler works as formally defined

GenAI Data Pipeline Scripting and Automation
- Developed a fault-tolerant Gemini API scraping tool in Python, engineering an automatic API key rotation system to effectively manage API quotas and ensure continuous operation while processing and saving data with pandas.
- Built a high-throughput synthetic image generator for OCR training, leveraging Python's multiprocessing library to generate a 300,000-image dataset in parallel, applying randomized distortions like skew and blur.
- Authored a separate data validation script using pandas to parse and clean JSON responses from the API, verifying data integrity by comparing generated content against the source CSV files.