

Software Engineer · AI Systems

Building AI technologies with AI tools.

I learned Computer Science first, then learned the inside of LLMs by hand — the substrate underneath and the tools on top. When an AI tool is wrong, I notice. When a model fails silently, I know how to diagnose it.

[See everything I've built >](#)

FOUNDATIONS

Hand-implemented transformer and GPT internals from scratch — **attention, backpropagation, tokenization, embeddings** — following Karpathy's **Neural Networks: Zero to Hero** end-to-end, before adopting AI-assisted development. Self-directed coursework in the math and ML underneath: **Stanford CS229**, MIT OpenCourseWare Linear Algebra, Differential Equations, Calculus, and MIT 6.034 Artificial Intelligence.

SELECTED PROJECTS

Turbofan Predictive Maintenance

Python · PyTorch · Gemini · Flask · 2025–2026

Dual-head Transformer for jet-engine anomaly detection and Remaining Useful Life.

Diagnosed a total model collapse to a data signal-to-noise problem, not the model — rebuilt the data, then derived a cost-weighted operating point cutting missed failures by 95%+.

[See the Case Study >](#)

AskMickey — AI Disney Assistant

Dart · Flutter · Gemini · 2025

A **classify-then-route dispatcher** on Gemini — MoE-inspired but deterministic — routing each query to one of eight handlers before any generative call, with safety paths at classification time. Concept and architecture mine; implementation AI-assisted from my spec.

[See the Case Study >](#)

Weather: Physics vs. ML

JavaScript · NWS · ECMWF AIFS · 2026

A live evaluation system comparing physics-based and machine-learning forecasts — consensus, confidence, disagreement alerts, and a rolling accuracy scoreboard. Built rapid-MVP with heavy AI assist; **the real discipline was the verification loop.**

[See the Case Study >](#)

TECHNICAL SKILLS

AI / ML

PyTorch · Transformers · Generative AI / LLMs · RAG · Agentic AI · Multi-Task Learning · Prompt Engineering · Structured Outputs · scikit-learn

LANGUAGES

Python · C · C++ · Java · JavaScript · Dart · Swift · SQL · HTML · CSS

FRAMEWORKS & TOOLS

Flask · Flutter · Pandas · NumPy · Matplotlib · Git · VS Code

PLATFORMS & INFRA

Linux / UNIX · Amazon EC2 · Apache · MySQL · Arduino · Raspberry Pi

EXPERIENCE — EPCOM CORPORATION

Machine Learning Software Engineer Intern · Summers 2024–2025

Built a Transformer-based predictive-maintenance system for multivariate time-series sensor data. Integrated retrieval-augmented LLMs via prompt engineering and structured outputs; built data pipelines and evaluation harnesses for iterative development and benchmarking.

Software Development Intern · Summers 2020–2023

Full-stack components of an Applicant Tracking System (Linux · Apache · MySQL · PHP · JavaScript · Bootstrap) on Amazon EC2; automated cron jobs with pattern recognition to ingest applicants from IMAP email.

EDUCATION

University of Florida · August 2025

B.S. Computer Science

St. Petersburg College

A.A., Cum Laude · GPA 3.7

Volunteer Coach · Town of Belleair

Basketball (Coach of the Year) & Tennis, ages 4–16