

DAVID GARY

ML & systems engineer building applied machine learning, real-time systems, and research-driven software.

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TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Go, C++, C, SQL

ML & AI: Deep Learning, PyTorch, Transformers, CLIP, OCR/TrOCR, NLP, Computer Vision, Reinforcement Learning

Web, Mobile & APIs: React/React Native, Next.js, Node.js, Express, FastAPI, REST APIs, Stripe, SwiftUI, ARKit, Tauri

Systems & Security: Real-time Streaming, WebSockets, Kubernetes, Docker, Celery, Redis, Digital Forensics, Cryptography

Data & Tools: PostgreSQL, SQLite, Prisma, Git, Vite, Tailwind CSS, CI/CD, MLOps, LaTeX

EXPERIENCE

Watermark Inc.

Remote

Machine Learning Engineer

Apr 2024 – Present

- Led development of QuillParse, Watermark's AI document parsing product: architected a preprocessing pipeline (+30% model performance) and trained models for a 25% gain in extraction accuracy over baseline
- Integrated trained models into a production API for real-time document parsing serving enterprise clients

Software Engineer

Aug 2023 – Apr 2024

- Maintained the company website and built internal document-search tooling; supported AI development through data annotation and model evaluation

Freelance

Remote

Software & Machine Learning Engineer

Apr 2024 – Present

- Built production retail platforms with Stripe checkout, admin tooling, and API hardening, and shipped client ML and full-stack products
- Designed a recommender system for course learning pathways used by 10,000+ users

Narrative.ai

Remote

Contract Software Engineer

Jan 2024 – Apr 2024

- Built back-end services for real-time shipment tracking (status ingestion, state management, carrier integration) and optimized production database schemas for high-volume logistics data

University of North Carolina at Charlotte

Charlotte, NC

Graduate Research Assistant

May 2022 – Aug 2023

- Built a research framework to evaluate second-order optimization algorithms, tested replay buffer designs for continual reinforcement learning, and migrated legacy MATLAB codebases to Python

PROJECTS

Certainaity — Forensic Image Manipulation Detection — Python, PyTorch, CLIP, FastAPI, Celery, Kubernetes, React — [Link](#)

- Fused five specialized neural networks with handcrafted forensic features via learned ensemble weights; deployed as a FastAPI + Celery + Redis service on Kubernetes with Prometheus, chain-of-custody, and $\geq 85\%$ test coverage.

Packomation — Spatial Capture & Learned 3D Bin Packing — Python, PyTorch, Reinforcement Learning, FastAPI, React Native, ARKit, LiDAR — [Link](#)

- React Native iOS app turning LiDAR/ARKit spatial capture into optimized 3D load plans, with a height-map policy trained by PPO self-play that beats classical bin-packing heuristics on volume utilization and bin count, served over FastAPI with an ONNX export for on-device inference.

Macforensic — Forensic Imaging Tool for macOS — Python, Systems, Forensics, Security — [Link](#)

- Forensic acquisition CLI for raw disk imaging with manifest generation, SHA-256 verification, policy-gated live-acquisition modes, and optional Ed25519 signature / RFC3161 timestamp evidence sidecars.

EDUCATION

University of North Carolina at Charlotte

Charlotte, NC

M.S. Computer Science — 4.0 GPA, Phi Kappa Phi, Graduate Certificate in Applied AI

Dec. 2023