

Matthew Corwin

Technical Product Architect

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SUMMARY

Technical Product Architect who turns ideas into working MVPs fast. Years of coding fundamentals combined with AI-augmented development means I prototype in days what traditionally takes weeks—then communicate effectively with senior engineers to harden and scale. I see the big picture, understand the technical details, speak the language, and ship.

TECHNICAL SKILLS

Core Strength	AI-augmented development—rapidly prototyping full-stack apps using LLMs as a force multiplier
Building With	Python, TypeScript, JavaScript, SQL, React, Next.js
AI/ML	LLM Integration (Claude, OpenAI), NLP, Deep Learning (TCN), Predictive Modeling
Systems	REST APIs, Data Pipelines, Real-time Dashboards, Database Design
Tools	Git, Linux, Windows

FEATURED PROJECTS

Predictive Maintenance Dashboard

Industrial IoT monitoring system with ML-driven failure prediction

- Built real-time bearing health monitoring dashboard using vibration analysis
- Implemented predictive maintenance algorithms to identify equipment degradation

[Python](#), [TypeScript](#), [React](#), [Next.js](#), [Machine Learning](#)

Speech Profiler

AI-powered communication analysis platform

- Developed real-time speech capture and transcription system
- Integrated LLM (Claude) for speaker profiling and communication pattern analysis

[Python](#), [NLP](#), [Claude API](#), [Audio Processing](#)

TCN Trading Bot

Algorithmic trading system using deep learning

- Architected cryptocurrency trading system with Temporal Convolutional Networks
- Implemented online probability calibration and walk-forward validation

[Python](#), [Deep Learning](#), [Financial Data APIs](#)

Whistleblower Workbench

False Claims Act intelligence and fraud detection platform

- Designed investigative dashboard for analyzing federal spending patterns
- Built ML models to identify potential fraud indicators in healthcare and government contracts

[JavaScript](#), [React](#), [Next.js](#), [Machine Learning](#)

NCAA Tournament Predictor

Sports analytics and prediction market strategy system

- Created ML system combining Elo ratings, efficiency metrics, and team strength models

- Developed play style fingerprinting for championship odds generation
- [Python](#), [Machine Learning](#), [Statistical Modeling](#)

PROFESSIONAL EXPERIENCE

CTO / CIO 2017 – Present

New Energy Initiative

- Lead all technology strategy for green energy company pivoting into tech product marketplace
- Built company website, CRM integrations (GoHighLevel), and custom automation workflows
- Design and implement data pipelines connecting forms, CRM, and internal systems
- Conduct requirements discovery sessions with staff to identify pain points and build solutions
- Onboard and train new employees on technical workflows and systems

Independent Technical Prototyper 2023 – Present

- Build functional MVPs in days—validating concepts before committing engineering resources
- Architect full-stack AI/ML solutions, then hand off to senior developers for production
- Bridge the gap between "idea" and "working demo" for industrial, financial, and analytical domains

Store Supervisor 2013 – 2019

Energy North Group | Essex, MA

- Managed daily operations, scheduling, and profitability analysis
- Led hiring process and team coordination across multiple shifts

Assistant, Computer Science Graduate Admissions 2012 – 2013

George Washington University

- Processed applicant data with high accuracy and attention to detail

EDUCATION

George Washington University | Washington, DC

Sociology Studies | 2012 – 2015

ADDITIONAL

- Self-directed learner with 10+ years of hands-on technical exploration
- Strong communicator with experience presenting to groups
- Background in team leadership across multiple industries