

Matthew Gennarelli

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EDUCATION

University of Southern California — Los Angeles, CA

B.S., May 2024

Computer Science & Business Administration | Presidential Scholar | National Merit Finalist

Study Abroad: Switzerland | Coursework: Artificial Intelligence, Software Engineering, Statistics, Entrepreneurial Finance, Strategic Management

EXPERIENCE

AI Engineer & Technical Lead | PureStrykAI

Feb 2025 – Nov 2025

- Shipped a cross-platform AI desktop application from zero to production across 4 golf facilities and 30+ active users, owning the full product lifecycle from requirements gathering with the CEO through architecture, development, and deployment.
- Built a hybrid rules-based + LLM analysis engine using OpenAI GPT-5 with structured JSON outputs and prompt engineering to generate personalized coaching insights from raw swing data.
- Designed and deployed an OCR-based ETL pipeline that extracts, validates, and loads swing metrics from launch monitor images into PostgreSQL, eliminating manual data entry and enabling automated performance reporting across all facilities.
- Architected the full technical stack end-to-end: React/TypeScript + Tauri frontend, Python/FastAPI backend, PostgreSQL, Firebase Auth, and Stripe integration for tiered SaaS billing and subscription management.
- Implemented CI/CD workflows via GitHub Actions for automated testing, cross-platform builds, and deployment packaging (PyInstaller, NSIS).

Treasurer & Alumni Chair | Phi Sigma Kappa, USC

Aug 2022 – Dec 2023

- Managed finances for a 100+ member chapter with a \$1M+ annual budget. Worked with external accountants and the national organization to produce and review financial statements (B/S, I/S, CFS, A/R).
- Raised over \$100K in alumni donations through targeted outreach, events, and newsletter communications.

PROJECTS

Property Manager AI Agent | Python, OpenAI API, FastAPI, Pydantic

- Built an autonomous AI agent that monitors Gmail via IMAP, classifies tenant email intent (maintenance, payment, lockout), extracts entities via regex and NLP, and generates context-aware replies using GPT-4o-mini with structured JSON outputs.
- Cross-references a resident database for personalized context injection, sends professional replies via SMTP, and persists categorized action items as structured records for property management workflow automation.

BracketBrain | Python, FastAPI, NumPy/SciPy/Pandas, JavaScript, GitHub Actions

- NCAA tournament prediction engine using Monte Carlo simulation trained on 1,000+ games (2008–2025). Multi-source data pipeline, interactive bracket picker, automated Vegas odds comparison, and full backtesting framework.

TheSpot | React Native, Expo, TypeScript, Supabase, Mapbox

- Building a mobile app for AI-powered venue discovery with personalized recommendation scoring, real-time crowd intelligence, and social planning. Supabase backend, Google Places API integration, and swipe-based discovery UX.

SKILLS

AI / ML: LLM Integration (OpenAI GPT-5/4o, Claude/Anthropic API), Prompt Engineering, Structured Outputs, RAG, NLP, OCR, AI Agents, MCP, Vector Databases, AI-Assisted Development (Cursor, Claude Code, Codex)

Languages: Python, SQL, Java, C++, TypeScript/JavaScript, R, Swift

Frameworks & Tools: React, FastAPI, PostgreSQL, Firebase, Supabase, Tauri, Stripe API, REST APIs, Git, CI/CD, ETL/Data Pipelines

Analytics: NumPy, SciPy, Pandas, Excel/Sheets, Monte Carlo Simulation, Data Modeling, Web Scraping (BeautifulSoup)

Business & Product: Full product lifecycle ownership, requirements gathering, stakeholder management, cross-functional communication, budgeting, financial analysis