John Swindell

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EDUCATION

Southern New Hampshire University Expected April 2026
BS, Computer Science | President's List 2024 – 2026 GPA: 3.97

TECHNICAL SKILLS

- **Languages:** Python, C++, Java, SQL, JavaScript, HTML/CSS
- **AI & ML:** Gemini API, OpenAI API (LLM Integration), Scikit-Learn, Pandas, NumPy, Prompt Engineering
- **DevSecOps & Cloud:** Docker, Google Cloud Platform (GCP), GitHub Actions, Git (CI/CD), Linux, Airflow
- **Methodologies:** Agile/Scrum, Test-Driven Development (TDD), RESTful Services

EXPERIENCE

Technical Lead | Tekly Studio Dec 2025 – Present

- **AI Application Development:** Integrated the OpenAI API into an internal Slack bot to provide automated, context-aware technical support and documentation retrieval for engineering staff.
- **Tooling Automation:** Engineered a headless Learning Management System using Google Workspace APIs and the Gemini API to programmatically generate and distribute customized, documentation-based curricula.
- **Engineering Leadership:** Recruited back to lead a cohort of 30+ engineers; responsible for architectural guidance, code reviews, and enforcing RBAC policies via GitHub Actions, and strict Git workflows.

Data Engineering Intern | Tekly Studio Jun 2025 – Sep 2025

- **ML Data Infrastructure:** Architected a survivorship-bias-free data pipeline on GCP using Docker and a custom GCS-backed caching layer. Served as the single source of truth for quantitative research and model training.
- **Feature Engineering:** Developed a leak-proof feature extraction engine (Fama-French factors, Z-Scores) that solved sparse data issues, enabling the delivery of a baseline trading model (+61.95% backtested return).
- **Model Validation:** Implemented SHAP diagnostics within the model to detect overfitting and validated the ingestion pipeline, blocking 6,000+ data integrity errors before they could pollute downstream models.

Senior Server Administrator | Repulsion Ltd. Oct 2021 – Oct 2023

- **Server Administration & Incident Response:** Managed 16 Linux-based game server environments, utilizing Bash for maintenance and collaborating with developers to troubleshoot plugin failures in production.
- **Technical Support:** Acted as the primary escalation point for complex user issues, translating technical constraints into clear communication for non-technical stakeholders.

PROJECTS

AI-Driven Onboarding Application GitHub

- **LLM Integration:** Engineered a Headless LMS using the Gemini API to ingest unstructured internal wikis and synthesize role-specific curriculum, demonstrating rapid prototyping with Large Language Models.
- **Document Automation:** Built a Python engine to programmatically generate styled Google Docs (comparable to MS Graph API), injecting variable data and tracking links to monitor user progress.
- **Technologies:** Python, Gemini API (LLM), Google Workspace API, RESTful Services, Pandas

ML Strategy Validation Framework GitHub

- **Model Governance:** Implemented a Signal Funnel diagnostic architecture using QuantStats and SHAP to interpret model outputs, successfully identifying and disqualifying high-risk strategies.
- **Validation Pipeline:** Engineered a custom Walk-Forward validation harness using Scikit-Learn's TimeSeriesSplit to prevent lookahead bias and overfitting in non-stationary time-series data.
- **Technologies:** Python, CatBoost (Gradient Boosting), Scikit-Learn, Pandas, SHAP

Quantitative Data Engineering Pipeline GitHub

- **ML Data Integrity:** Engineered a strict point-in-time architecture that eliminates survivorship and lookahead bias, ensuring historical data accurately reflects publication lags for valid model training.
- **Optimization:** Implemented a custom two-tier caching strategy (Local Disk + GCS) that reduced external API latency and dependency by over ∼90% during heavy training iterations.
- **Technologies:** Python, Pandas, Google Cloud Storage, REST APIs, Docker