

# DREW ERNST

Data Analyst & Software Developer

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## Summary

Adept Systems Developer and Data Analyst with a unique background in Public Relations and Marketing, now a self-taught software developer. I specialize in transforming complex data into actionable insights and have a proven track record in architecting systems that prioritize precision and compliance, such as HIPAA-compliant engines and AI-driven finance trackers. I am eager to bring my hands-on architectural approach to a collaborative team focused on large-scale system design and innovation.

## Key Achievements

-  **HIPAA Compliant**  
Eliminated server-side vulnerabilities and IT maintenance by architecting a single-file browser application that handles HIPAA-protected information with zero POST requests
-  **ETL Pipeline Success**  
Engineered full ETL pipeline in Python (Pandas/NumPy) that cleans raw bank CSV data and loads it into a PostgreSQL Star Schema.
-  **Enhanced Financial Tracking**  
Powered a behavioral finance dashboard with real-time net worth tracking, predictive spending analysis, and a 9-step behavioral onboarding flow
-  **Mobile Optimization Achieved**  
Enabled 100% mobile responsiveness across iOS/Android platforms using Vercel deployment.
-  **Business and State Consulting**  
Consult on process optimization and data integrity for state agencies and local businesses-bridging technical execution with business strategy
-  **Gitlab & Github**  
Architected and deployed containerized environments using Docker/Nginx with GitLab CI/CD pipelines

## Skills

Core Competencies:

ETL Pipeline Development • Data Integrity Validation • Behavioral Pattern Recognition • System Architecture Design • API Design & Integration • Component-Based Architecture • CI/CD Pipeline Implementation • Clinical Narrative Validation

Tech Stack:

Python (Pandas, NumPy, FastAPI) • React 19, Next.js, Vite • PostgreSQL, Star Schema Design • TypeScript (Strict Typing) • Docker, Nginx • Git, GitHub Actions, GitLab CI/CD • AWS (S3, Lambda) • Jest, Test-Driven Development

## Education

- Frontend Simplified** 2025 - 2026  
Mentored by David Bragg Intensive training in zero-latency UI/UX React architecture Professional-grade engineering standards
- Quincy University** 2011 - 2012  
Bachelor of Arts in Public Relations
- Culver-Stockton College** 2002 - 2005  
S.I.F.E (Students in Free Enterprise) - Strategic Marketing Lead, developed high-impact outreach strategies and demonstrated entrepreneurial leadership in competitive environments

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## Projects

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### MCSDD | PCSP Assistant - Missouri State Agency Compliance Engine

Missouri

<https://dte-solutions.icu/case-study-pcsp/>

10/2025

#### Case Study

- Architected a "Zero-Footprint" Logic Engine that eliminated all server-side privacy risks and hosting fees. By processing HIPAA data locally in volatile RAM, the system ensures 100% data residency with zero POST requests.
- Eliminated Missouri DMH audit rejections by building an automated validation system. Engineered hard logic to enforce state-mandated "Active Treatment" structures and person-centered supports, significantly reducing administrative revision cycles.
- Achieved HIPAA technical compliance without a BAA or database by developing a custom security framework featuring 4-second debounced auto-saves, 30-minute idle timeouts, and 30-day PHI auto-expiry to ensure zero persistent data footprint.
- Designed a relational schema to support multi-goal architectures and behavioral mapping, maintaining full import/export integrity, which resulted in an increase in data accuracy and a reduction in data processing time for healthcare providers.
- Eliminated IT overhead and licensing fees by deploying a zero-install workspace using agency internal drives; leveraged existing Active Directory permissions to provide instant, browser-based access to a nine-domain clinical drafting suite.

### Pulse-AI: Behavioral Finance Tracker - Full-Stack Data Science

<https://dte-84.github.io/Pulse/>

01/2026

- Built the entire backend pipeline to handle the messy reality of bank logs-ETL process using Python/Pandas to clean, impute, and prepare raw CSV data for PostgreSQL Star Schema.
- Implemented behavioral logic to flag "Impulse Triggers" by correlating spending velocity with time-of-day and mood indices. Every transformation is validated by Jest child-process tests to ensure mathematical accuracy.
- FastAPI backend with MongoDB, utilizing Grouped Imputation techniques for multi-period wealth forecasting. AWS S3 integration creates "sticky" workflows for secure document storage.

### NestLegacy: Wealth Transfer Intelligence Platform - Behavioral Intelligence

<https://dte-84.github.io/NestLegacy/>

01/2026

- Designed a digital trust layer to capture "Initial Intent" during the \$84 Trillion Great Wealth Transfer. Identified a cognitive gap where Gen X/Millennial inheritors are 3x more likely to consult AI-driven platforms before engaging human fiduciaries.
- Built an AI-first lead intelligence system that pre-qualifies users behaviorally, delivering high-fidelity, high-ROI data to CPAs and attorneys by leveraging structured behavioral pattern recognition, resulting in a increase in lead conversion rates and a reduction in time spent on initial client assessments.

### SetLogic: AI Fitness & Nutrition Coach - Full-Stack Mobile PWA

<https://set-logic.vercel.app/>

02/2026

- Production-ready mobile app with Firebase authentication (Google/Apple OAuth), Firestore backend for data persistence, and Claude AI API integration for intelligent workout/nutrition recommendations.
- Integrated wearables APIs (Apple Health, Google Fit, Fitbit) for automated biometric sync, enabling AI-driven progress analysis and recovery optimization.
- Deployed via Vercel with automated CI/CD-sub-second load times, 100% mobile responsive across iOS/Android platforms.

## Find me online

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 **GitHub**  
[github.com/dte-84](https://github.com/dte-84)

 **Portfolio**  
[dte-84.github.io/DTE-E-Portfolio](https://dte-84.github.io/DTE-E-Portfolio)