

David Mautz

dmautz.com | dmautz@gmail.com | (985) 237-9494 | New Orleans, LA

Professional Summary

Results-driven Senior Data Engineer with 15 years of experience at the U.S. Treasury, specializing in AI-driven solutions, data engineering, and blockchain technologies. Expertise in designing and implementing scalable ETL pipelines, AI agent platforms, and automated workflows using Python, PySpark, FastAPI, and AWS. Proven track record in delivering high-impact data systems for financial institutions and leading Agile teams. Passionate about leveraging AI, machine learning, and crypto technologies to solve complex problems and drive innovation.

Technical Skills

- **AI & Machine Learning:** LLMs, NLP, AI Agents, Prompt Engineering, Machine Learning Pipelines
- **Programming:** Python, Ruby, JavaScript, Node, React, TypeScript, FastAPI, Solidity, Smart Contracts
- **Data Engineering:** PySpark, Hive, Trino, Parquet, SQL, ETL Pipelines, Supabase, PostgreSQL
- **Cloud & DevOps:** AWS (S3, EMR, EC2, Lambda), Git, Rundeck, Apache, Nginx, Atlassian Bamboo
- **Project Management:** Agile, Scrum (Certified Scrum Master, 2016), JIRA, Workflow Automation
- **Other Tools:** Tableau, Highcharts, ServiceNow, SharePoint, LDAP, MongoDB

Professional Experience

Senior Data Engineer

U.S. Treasury - Office of Financial Research, Washington, DC (Remote) | July 2016–Present

- Engineered ETL pipelines for 25+ terabyte-scale datasets using PySpark, Python, Ruby, and AWS (EMR, S3, Lambda), enabling recurring data processing for financial research.
- Designed and deployed an end-to-end data collection system for 40 financial institutions, integrating AWS S3 drop zones, IAM roles, Lambda for validation, and Rundeck for automated workflows.
- Developed an automated entity resolution system using Python, PySpark, and Rundeck, streamlining Money Market Fund issuer identification for data scientists.
- Built data ingestion pipelines leveraging SFTP, SSL, S3, and web scraping, ensuring secure and efficient data acquisition from diverse vendor sources.
- Optimized task automation and data workflows with Rundeck, enhancing operational efficiency for research teams.

Software Engineer

U.S. Treasury - Office of Financial Research, Washington, DC | April 2013–July 2016

- Developed the OFR Data Catalog using Ruby on Rails, Bootstrap, jQuery, Blacklight, and Solr, providing metadata access and request workflows for researchers.

- Built and maintained Ruby on Rails applications for budgeting, procurement, asset management, and workflow automation, improving operational efficiency.
- Designed a Personal Identity Verification (PIV) synchronization system in Ruby on Rails, later migrated to ServiceNow, automating Active Directory and Exchange account management.
- Configured full-stack environments with Ruby on Rails, Nginx, Apache, PostgreSQL, and AWS EC2 on RedHat Linux, ensuring robust system performance.
- Led Agile Scrum teams, defining requirements in JIRA and collaborating with analysts to deliver high-quality solutions.

IT Specialist

U.S. Treasury - Office of the CIO, Washington, DC | September 2010–April 2013

- Administered SharePoint 2010 across 16 offices, developing custom widgets and delivering user training to enhance collaboration.
- Managed BMC Remedy for ticketing, incident, asset, and change management, improving IT service delivery.
- Automated PIV data synchronization using IBM Tivoli Identity Manager, streamlining employee identity management processes.

Lead Developer, ACS Creative (2009–2010): Managed 50+ client websites, implementing custom WordPress solutions and DevOps practices.

Education

Louisiana State University, Baton Rouge, LA

- MBA, Finance | May 2009
- B.S., General Studies (Business, Economics, Communication Studies) | December 2006

Projects & Leadership

- AI Agent Platform (2025): Built a scalable framework for AI agents with multi-provider support, leveraging Python, FastAPI, and LLMs github.com/dmautz1/ai-agent-platform
- Regular App (2024): Developed a task-tracking app with subscription-based programs using React, Node.js, and Supabase stayregular.io
- Crypto Enthusiast (2019–Present): Actively engaged in blockchain, smart contracts, and NFTs, with hands-on experience in Solidity and crypto-related projects.
- Founder, Rock Paper Books (2014–2018): Republished classic books with modern cover art, managing all technical and operational aspects.
- President, HOA Board of Directors, 1300 Mass Owner's Coop Inc. (2016–2019): Led strategic initiatives and community governance.

Certifications

- Certified Scrum Master (2016)