

Nicholas Wagner

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PROFESSIONAL SUMMARY

Financial engineering and AI/data systems builder focused on local-first research infrastructure, NLP/LLM pipelines, event-driven investing workflows, and quantitative dashboards. Experience spans Federal Reserve communication scoring, SEC filing/event extraction, portfolio-signal research, API/data quality engineering, and robotics/control software from the early Opentrons liquid-handling platform.

EDUCATION

Lehigh University — M.S., Financial Engineering

May 2026

University of Wisconsin–Madison — MBA, Finance

May 2012

Lehigh University — B.A., Mathematics

September 2005

SELECTED PROJECTS

AI-Native Financial Research Infrastructure / m-cache Projects

2025 – Present

- Building local-first Python research infrastructure for SEC filings, Federal Reserve communications, earnings calls, and news using normalized Parquet authorities, deterministic document identities, raw/parsed artifact tracking, and reproducible ingestion workflows.
- Designing shared CLI/API conventions across py-sec-edgar-m, py-fed-m, py-earnings-calls-m, and py-news-m to support event extraction, augmentation, provenance tracking, and offline research.
- Prototyping an AI-native event-driven investment workflow in which agents ingest public documents, extract structured events, generate trade candidates, run backtests, and produce experiment postmortems.

Federal Reserve Communication Scoring — "FedGPT"

Sponsor: Mikhail Samonov, Two Centuries Investments · 2026

- Built an acquisition and scoring pipeline for Federal Reserve/FOMC communication materials, including scraping, normalization, OpenAI Batch API job construction, model-output parsing, and score materialization.
- Produced structured policy-communication score families covering short-rate sentiment, long-rate sentiment, inflation, employment, credit conditions, economic growth, surprise, and policy phase.
- Connected scored communication series to a SolidJS/ECharts dashboard for sponsor-facing analysis of static-versus-dynamic portfolio explanations.
- Wrote a sponsor-facing technical report documenting the system architecture, scoring methodology, limitations from sparsity/serial correlation, and a staged continuation plan.

SEC 8-K Event Classification / Corporate Event Forecasting

Sponsor: Hariom Tatsat, Barclays · 2023 – 2024

- Parsed 15 years of S&P 500 8-K filings using SEC EDGAR tooling and custom parsing workflows; labeled filings into 14 material corporate-event classes including M&A and share repurchase.
- Trained a BERT-based classifier and backtested event portfolios against an equal-weight benchmark.
- Built filing-to-event research workflows connecting document parsing, labeled datasets, model training, and portfolio testing.

RELEVANT WORK EXPERIENCE

Lehigh University — Teaching Assistant, Introduction to Finance

Bethlehem, PA · September 2023 – May 2024

- Conducted weekly recitations for approximately 30 students, reinforcing foundational finance concepts and quantitative problem-solving methods.

Infosys Limited — Quality Assurance Engineer, American Express Contract

Tempe, AZ · September 2021 – September 2023

- Designed and executed functional and regression tests for Java-based APIs; authored Postman suites and SQL validation queries to verify service behavior and data flows.
- Investigated API defects across request/response contracts, persistence behavior, and integration environments; contributed code-level review feedback and test-harness improvements.

Opentrons Labworks — Technical Co-Founder / Software Engineer

New York, NY · August 2013 – September 2016

- Designed and implemented firmware and a Python API for the OT-1 liquid-handling robot, helping ship the product to more than 300 labs in 30 countries.
- Managed a small development team while integrating CI/CD and Agile practices into early product development.

- Helped secure a \$7.2M seed investment by delivering a functioning prototype during HAX and Y Combinator Demo Day.

State of Wisconsin Investment Board — Fixed Income Analyst Intern

Madison, WI · May 2011 – May 2012

- Developed Excel/VBA tools for modeling Treasury spot rates.
 - Assessed bond valuations and ratings by analyzing company financial statements, bond covenants, and fixed-income risk factors.
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ADDITIONAL EXPERIENCE

Sweet Magnolia Churros — Co-Founder

April 2024 – Present

- Co-founded a catering and farmers-market food business; handled licensing, vendor agreements, compliance, logistics, and event operations.

Energy Engineering and Controls — Project Associate

2017 – 2022

- Managed static-display aircraft restoration projects, including scope, schedule, vendor coordination, documentation, and safety-conscious field workflows.

Mathnasium — Math Tutor

October 2021 – July 2022

- Delivered individualized mathematics instruction using the Mathnasium method.
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CORE COMPETENCIES

Programming & Data

Python, SQL, Java, C/C++, JavaScript/TypeScript, pandas, NumPy, scikit-learn, PyTorch, DuckDB, Parquet

ML / NLP / LLM Systems

LLM batch scoring, structured extraction, embeddings, prompt/version control, BERT classifiers, model evaluation, time-series signal research

Financial Analytics

Fixed income term structure, event-driven alpha research, factor models, portfolio attribution, Monte Carlo, backtesting

Cloud / DevOps / Tooling

AWS Lambda, S3, AWS Batch, Docker, GitHub Actions, Jenkins, Terraform, Linux

Visualization & Reporting

SolidJS, ECharts, Streamlit, technical writing, sponsor-facing reports, dashboards

