

# Garth Mortensen

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## Data Science Engineer

Creative data scientist and software engineer, skilled at wiring up end-to-end production systems.

## Featured Project: [SpilloverLab.com](#)

A live financial time series analysis platform featuring ARIMA, GARCH, and spillover modeling. It delivers simple-English interpretations, interactive visualizations, [REST](#) and [GraphQL](#) APIs, and [MCP server integration](#) for AI agent control. Built with a modular, microservice-based architecture, deployed to the cloud, and fully [documented](#), [tested](#), and [quality controlled](#) via CI/CD.

## Professional Experience

### Federal Reserve Bank of Minneapolis

**Sr. Data Scientist, National Stress Testing Program, Production.**  
*Minneapolis, MN - 06/2022 – Present*

- Maintained multiple models, infrastructure, dashboards, adhoc analyses for Board of Governors.
- Served as Production econometric team's informal python lead, and formal liaison to middle and backend teams, ensuring smooth integration.
- Independently introduced unit testing, CI/CD, Makefiles, simple-English docs.
- Trained economists in Python, Linux, and computer science principles, promoting self-sufficiency.
- Technical lead in migrating Production codebase across OS, language versions, environments, enabling mission-critical reproducibility.

### University of Minnesota Coding Bootcamp

**Fintech Instructor. [Student Review](#).** *Saint Paul, MN - 09/2021 – 04/2023*

- Taught Python programming to working professionals, ranging from sysadmins to finance directors.
- Explored cutting-edge topics such as ML/AI and blockchain/Solidity smart contracts.

- Scored 9/10 across all rating categories (engagement, clarity, knowledge), across 270+ lecture hours.

## Medica

**Sr. Healthcare Analyst** *Minnetonka, MN - 11/2019 – 06/2022*

- Implemented models to predict member health scores.
- Discovered techniques to automate database reconciliation.
- Configured bare-metal Linux server to run automated OCR process to ETL .pdf information into database.
- In zero-sum ACA marketplace, consistently outperformed competition.

## United Health Group R&D

**Developer/Data Scientist, contract.** *Minneapolis, MN - 01/2019 – 11/2019*

- Replicated academic research on internal data to uncover actionable insights presented to the CEO.
- Built end-to-end data pipelines: API ingestion, transformation, validation, and visualization.
- Contributed to the design and development of a next-gen big data platform for health research.

## Munich Reinsurance

**Sr. Data Analyst.** *Minneapolis, MN - 05/2017 – 12/2018*

- Programmatically scanned and transformed unstructured claims data into a structured 7M+ record star-schema database.
- Analyzed the resulting dataset to surface insights, including reports for top diagnoses by cost and prevalence, and ML decision tree to predict claims.
- Built and deployed custom productivity tools with clean, user-friendly UI frontends.

## Decyphed

**Entrepreneurial NLP Dev.** *Paris, France - 05/2015 – 01/2016*

- Programmed text analysis plug-ins/tools specialized in language learning applications.

## Saylor Consulting

**Industry Cost Consultant, contract. Recommendation available.** *San Francisco, CA - 12/2013 – 07/2014*

- Analyzed industry factors influencing construction industry costs (material/labor) and forecast prices.

- Overhauled cost benchmarking using early industry indicators, resulting in algorithmic, reproducible cost setting.
- Delivered data-driven market analysis reports and product presentations to Federal client.

## **GE Capital REIM**

**Investor Relations.** *Paris, France - 07/2012 – 12/2012*

- Oversaw financial database, competitor and industry developments, financial metrics.
- Interpreted market fundamentals for big-ticket investors seeking to purchase entire real estate fund portfolio.
- All \$25+ billion in assets sold off to Blackstone and other financial institutions.

## **Xinhua News Agency**

**Financial News.** *Beijing, China - 02/2009 – 07/2011*

- Led a 15+ person international team to launch a new economics news show, working 6+ months without PTO to meet a high-stakes deadline.
- Developed a demand-driven airtime allocation algorithm based on API-driven topic popularity; the method was later leaked to CNN International and appeared on their daily broadcast lineup.
- The program successfully sold content to major global news networks including CNN and Nikkei.

## **Caijing Magazine**

**Economic Research Assistant.** *Beijing, China - 01/2008 – 09/2008*

- Published 15+ print stories, commodity reports, and analyses.
- Administered and redesigned website. Introduced self made podcasts, video stories, user comments, and other Web 2 technologies, doubling online readership.
- Managed the internship program, allocated work based on strengths and interests.

## **College, high school jobs**

*Minneapolis, Minnesota. 1/2001 – 12/2007*

- College: Owner of brick-and-mortar studio providing website design, SEO and graphic design services.
- High school: Employee of small business providing graphic design, SEO and offsite hosting/storage services.

## **Formal Education**

### **St. Thomas University**

St. Paul, USA. 2023

- Double MSc in Software Engineering and Data Science
- Double MSc Certifications in AI and Big Data
- GPA 3.9

### **EDHEC Business School**

Nice, France. 2012

- MSc Finance

### **Hamline University**

St. Paul, USA. 2007

- BA Economics

## **Skills**

**Tech:** Python/R, SQL/NoSQL, database design, Linux, APIs, AWS, CI/CD, containers. Aspiring to build decoupled microservices, APIs (RESTful/GraphQL), fullstack prototyping, 12-factor app solutions.

**Certifications:** MS Software Development, MS Databases, MS IT Networking, MS IT Security, MS HTML/CSS, AWS Cloud Practitioner, Graph SQL, Google Analytics IQ, Excel/VBA, Bloomberg Terminal.

**Languages:** English, French and Mandarin Chinese (diminishing CEFR B2).