

WILLIAM GOODE

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EDUCATION

Ph.D. in Mathematics

University of North Texas | 2023

Dissertation: Annihilators of irreducible representations of the Lie superalgebra of contact vector fields

4.0 GPA | Published in *Expositiones Mathematicae*

B.S. in Mathematics, B.S. in Economics

University of North Texas | 2017

3.79 GPA, Cum Laude

TECHNICAL SKILLS

Languages: Python, SQL (BigQuery, MS SQL Server, PostgreSQL), C# / .NET

Cloud & Infrastructure: AWS (Lambda, S3, RDS, Athena), GCP (BigQuery, Cloud Storage, Cloud Run, IAM), Docker

Backend: FastAPI, ASP.NET Core, Entity Framework

Data Engineering: Data pipeline development, Vector databases, DuckDB, MongoDB, Query optimization, Schema reconciliation

Machine Learning: SQL generation with LLMs, ML prototyping, scikit-learn, pandas

EXPERIENCE

Backend Engineer

Scaylor AI | August 2025 – Present

- Architected and deployed scalable data pipelines on AWS (Lambda, S3, RDS, Athena) and GCP (BigQuery, Cloud Run)
- Developed FastAPI microservices with Docker containerization for production deployment
- Led SQL generation service development with performance tuning for multi-tenant BigQuery architecture
- Implemented GDPR-compliant data workflows and IAM security provisioning
- Engineered database migrations (MS SQL Server → S3 → RDS) and data ingestion systems
- Served as technical point of contact for client integrations and onboarding
- Built vector database ingestion pipelines and prototype ML-based schema reconciliation

Software Engineer

Concan Consulting Corporation | April – June 2025

- Developed REST API in C# using ASP.NET Core and Entity Framework
- Consulted small e-commerce businesses on best practices

Senior Lecturer of Mathematics

Vanderbilt University | August 2023 – August 2024

- Taught calculus, statistics, and survey courses (6 courses total)

PROJECTS

Data Pipeline Architecture

Evaluated and implemented GCS → BigQuery pipeline from scratch. Assessed multiple approaches (AWS Athena/Glue, DuckDB, MongoDB) before selecting GCP BigQuery based on scalability and cost requirements.

Dynamic Data Visualization

Created local database in Microsoft SQL Server and connected to dynamic visualization web app using Dash and Flask.

Containerized ML Deployment

Deployed machine learning models on Amazon ECS as containerized web applications.

PUBLICATION

C. H. Conley, W. Goode. "An approach to annihilators in the context of vector field Lie algebras." *Expositiones Mathematicae* (2024). arXiv:2403.01728