# 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, Data ingestion pipelines

**Backend:** FastAPI, ASP.NET Core, Entity Framework, LLM integration

**Data Engineering:** Data pipeline development, Vector databases, Query optimization and performance tuning, Exploratory data analysis, Schema reconciliation

## EXPERIENCE

**Backend Engineer**

*Scaylor AI | August 2025 – Present*

- Developed and deployed a GDPR-compliant data ingestion infrastructure on Google Cloud Platform using Terraform, including Shared VPC, Customer-Managed Encryption Keys (CMEK), and EU-only resource location policies.
- Designed and implemented a scalable data workflow from Google Cloud Storage (GCS) to BigQuery, leveraging FastAPI for API development, Docker for containerization, and Google Cloud Run for serverless deployment.
- Led the development of an NL→SQL pipeline using Vertex AI, schema extraction, and dataset-aware prompt formatting, ensuring SQL safety through validation, cost checks, and PII masking.
- Architected and built a unified data tooling system, featuring a Cursor-like IDE with ERD visualization, a streaming chat agent, and notebook execution capabilities, optimizing performance through caching and asynchronous operations.

**Software Engineer**

*Concan Consulting Corporation | April – June 2025*

**Senior Lecturer of Mathematics**

*Vanderbilt University | August 2023 – August 2024*

## PUBLICATION

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