

# Guus Bouwens

(253) 409-7155 • [guus@bouwens.nl](mailto:guus@bouwens.nl)

[LinkedIn](#) • [Portfolio](#)

## EDUCATION

### Texas Tech University, Rawls College of Business

Lubbock, TX, USA

Master of Science in Data Science

Expected May 2026

- Recipient of three academic scholarships; **Top of Class** (GPA: 4.0/4.0)
- Relevant Coursework: Big Data Strategy and Security, Business Intelligence, Simulation & Optimization, Applied AI

### Vrije Universiteit Amsterdam, School of Business and Economics

Amsterdam, NL

Bachelor of Science in Econometrics and Data Science, Minor in Big Data

Sep 2020 – Mar 2025

- Led three capstone projects that earned the highest marks
- Relevant Coursework: Multivariate Statistics, Linear Algebra, Analysis, Time Series, Machine Learning, Databases

## PROFESSIONAL EXPERIENCE

### Texas Tech University, Graduate School

Lubbock, TX, USA

Statistical Consultant

Sep 2025 - Current

- **Advised** graduate students, postdocs, and faculty on **all stages of the quantitative research lifecycle**, from experimental design and data cleaning to model selection and interpretation of results.

### McDermott International, Ltd

The Hague, NL

AI Engineering Intern

Oct 2024 - Apr 2025

- **Boosted model accuracy 2x and speed 5x** by architecting an advanced RAG system with contextual chunking, hybrid retrieval, and reranking, deployed on **Azure** using **Python**, **LlamaIndex**, **Chroma** and CI/CD pipelines.
- Architected a security-focused **evaluation framework with in-text citations** to guarantee response factuality, partnering with PhD researchers and project owners in an Agile workflow.

### Invest-NL

Amsterdam, NL

AI Engineering Intern

Apr 2024 – Sep 2024

- Collaborated with Deep Tech and Energy investment teams to **fine-tune** a Llama-3-70B model, boosting **accuracy from 60% to 95%** for company classification while cutting API costs through **output optimization**.
- Automated the **MLOps** lifecycle from data ingestion to deployment using **Python**, **Power BI**, and **Azure CI/CD**, enabling continuous monitoring and dashboard updating.

### Talpa eCommerce

Amsterdam, NL

Data Science Intern

Mar 2023 - Oct 2023

- **Lifted recommendation engine performance, increasing activity by 10%**, by adding **cosine similarity** measures, informed by customer insights uncovered via **Fourier analysis** of multi-year behavioral data.
- **Engineered a scalable deployment** by containerizing the model with **Docker** and deploying on **AWS SageMaker** with **Jenkins** for CI/CD, within a **Jira**-managed Agile workflow.

## PROJECTS

- Applied **signal processing** and wavelet-based denoising to pulse data from 1,500 individuals, developed a **Random Forest** model with **SHAP** feature attribution, resulting in a **heart rate predictor** with **MAE of 8 bpm**.
- Trained a **Gradient Boosting classifier** on Mendeley Women's Health Dataset from temperature and sleep data to **predict menstrual cycle phases**, achieving **74% cross-validation accuracy**.
- Implemented **mechanistic interpretability** methods—including activation patching and causal tracing in **PyTorch**—to visualize neural patterns in the DeepSeek-R1 **transformer** model across 15 cognitive tasks.
- Converted FoodSeg103 to YOLO-seg polygons and **fine-tuned YOLO11x-seg** on GPU, enabling **accurate multi-ingredient food segmentation**.

## CERTIFICATES

AWS Fundamentals

Microsoft Azure Data Scientist Associate

AI in Healthcare (Stanford)

Agentic AI & RAG (IBM)

Deep Learning and NLP (DeepLearning.AI)

Machine Learning (UW & ICL)

## SKILLS

**AI & DS:** Python (PyTorch, TensorFlow, Scikit-learn, Keras, Pandas), NLP (LLM Fine-Tuning, RAG, Transformers), Time-Series Analysis, Statistical Modeling, Monte Carlo

**MLOps & Data:** AWS (SageMaker), Azure (CI/CD), GCP, Docker, MLFlow, SQL, PostgreSQL, MongoDB, ChromaDB

**Development & Visualization:** C++, VS Code, FastAPI, Git, GitHub Actions, Power BI

**Languages:** Dutch (Native), English (Fluent, 110/120 TOEFL).

*A detailed project portfolio and full list of certifications are available at the website linked above.*