Maria **Salop**

Profile

Machine Learning Engineer Intern and Data Science student focused on building reliable, scalable data solutions. Proven experience across the full data lifecycle, ranging from ETL pipelines and statistical analysis to model deployment in the cloud. Passionate about solving complex operational challenges through data-driven engineering.

Skills

- Machine Learning & Deep Learning
- Python (Pandas, Scikit-learn, PyTorch)
- Cloud Infrastructure (AWS, Azure)
- Containerization & Deployment (Docker)
- SQL & Database Management
- Statistical Analysis Modeling
- Data Visualization (Power BI, Plotly)
- Version Control (Git/GitHub)
- Agile Development Methodologies

Contact details

@ salopmaria37@gmail.com
+31 621 613 890
linkedin.com/maria-salop
github.com/MariaSalop
mariasalop.github.io
Breda, North Brabant, Netherlands

Personal information

Citizenship: **Romania**

Languages: **English** (C1), **Romanian** (native)

Experience

Machine Learning Engineer Intern *Cognita Innovative Solutions*
02.2026 – Present

◇ Contributing to the engineering team of a legal-tech startup.

- Designing and implementing scalable machine learning components for production environments.
- Assisting in the optimization of data pipelines and cloud infrastructure on AWS.
- Conducting research and performance evaluation to select appropriate AI architectures for business use-cases.

Education

Applied Data Science & Artificial Intelligence
Breda University of Applied Sciences **2023–2027**

◇ Expected graduation: June 2027

◇ Focus: Data Engineering, Deep Learning, Computer Vision.

Selected Projects

Predictive Truck Maintenance System *Industry Collaboration*

◇ Built a containerized anomaly detection pipeline for a heavy-vehicle fleet that integrates SQL, PDF telemetry, and RDW data to achieve 95.32% recall on failure predictions. By deploying an ensemble model, the system optimizes maintenance scheduling to target a 10–15% reduction in operational costs.

`Deliverables not publicly available (NDA)`

Transport Incident Prediction *ANWB Collaboration*

◇ Built machine learning models (XGBoost) to predict traffic incidents using weather patterns and historical data. Developed ETL pipelines with SQL, engineered features from messy real-world datasets, and optimized models to improve emergency response planning.

`Deliverables not publicly available (NDA)`

Emotion Classification - Deployment *End-to-End MLOps*

◇ Built a production-ready NLP pipeline with speech-to-text, preprocessing, and RoBERTa classification. Deployed via FastAPI and Docker on Azure ML with real-time inference. Demonstrates full lifecycle engineering from model training to cloud deployment.

Link to the project

NAC Breda Player Value Analysis *Sports Analytics*

◇ Developed a data-driven framework for player value assessment for a professional football club. Utilized predictive modeling to estimate market value and analyzed performance metrics to support scouting decisions, adhering to strict GDPR standards.

Link to the project

Air Pollution Mortality Dashboard *Data Analytics*

◇ Designed interactive Power BI dashboard analyzing global environmental data. Applied CRISP-DM methodology with rigorous data cleaning and correlation analysis. Translated complex datasets into actionable insights for decision-making.

Link to the project

Automated Root Segmentation *Computer Vision*

◇ Developed a deep learning pipeline using the U-Net architecture to automate the segmentation and length measurement of plant roots. Implemented advanced image preprocessing with OpenCV and trained TensorFlow models to replace manual data collection, streamlining biological research.

Link to the project