Anastasiia Mokhonko

DATA SCIENCE & AI STUDENT

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"Aspiring Data Scientist and AI Specialist passionate about digital innovation, machine learning, and solving real-world problems."

Summary

I am a second-year student at Breda University of Applied Sciences, where I have developed a solid foundation in data science, artificial intelligence, and applied machine learning. Throughout my studies, I have gained hands-on experience with Python, SQL, Power BI, and industry-standard tools for data analysis and visualization. I have built and deployed end-to-end machine learning pipelines, worked with deep learning frameworks (including transformers and U-Net), and applied NLP and computer vision to real-world projects. My academic journey also emphasized teamwork, agile project management, scientific research, and the ethical and legal aspects of AI, such as GDPR and the EU AI Act. I am passionate about solving complex problems and continuously expanding my technical and analytical skills.

Experience

Emotion Detection from Video – NLP Pipeline for Content Intelligence Agency

Breda, NL

DEVELOPER — *Feb 2025 – Apr 2025*

- Developed an NLP pipeline for emotion analysis in reality TV, including audio transcription, machine translation, and emotion classification.
- Implemented Naive Bayes, Logistic Regression, LSTM, and BERT and CamemBERT models for emotion detection.
- Applied POS tagging, NER, TF-IDF, and vector embeddings for advanced data processing.
- Used XAI techniques for model interpretation; delivered findings and a model card to client.

Root Segmentation & Robotic Control – NPEC Applied AI Project

Breda, NL

DEVELOPER — *Nov 2024 – Dec 2024*

- Built a computer vision and robotics pipeline for plant root analysis and automated microbial application using Opentrons OT-2.
- Trained a U-Net for root segmentation and extracted root system architecture for measurement.
- Developed PID and RL controllers (Stable Baselines 3, ClearML) for robotic movement and compared efficiency.
- Demonstrated a high-accuracy solution to client.

Consumer Expectations on Cybersecurity – Policy Research for SMEs

Breda, NL

ANALYTICS TRANSLATOR, TEAM LEAD — *Sep 2024 – Oct 2024*

- Led a Digiwerkplaats research project on consumer expectations for cybersecurity and privacy in SMEs.
- Coordinated project planning and task management (Trello, Scrum).
- Designed and analyzed quantitative (surveys) and qualitative (interviews) research; stakeholder and GDPR analysis.
- Produced an individual research paper, group policy paper, and presentation poster.

ANWB Safe Driving Application

Breda, NL

DEVELOPER, DATA ANALYST — *May 2024 – Jun 2024*

- Created a Streamlit app to analyze driver behavior and improve road safety using ANWB and external datasets.
- Implemented data preprocessing, time series analysis, and incident classification models.
- Applied Agile management and ensured EU AI Act compliance.

Farmer's Buddy: Potato Blight Detection AI

Breda, NL

DEVELOPER — *Feb 2024 – Apr 2024*

- Designed and developed "Farmer's Buddy," an AI-driven application for rapid detection of potato blight in leaves using deep learning.
- Built a multi-class image classifier (Healthy, Early Blight, Late Blight) using transfer learning with MobileNetV2, achieving 97% accuracy in final iteration.
- Applied Grad-CAM for model interpretability, highlighting features in leaf images critical for diagnosis and fostering user trust.
- Led user research with a think-aloud study to optimize UX; improved clarity, feedback, and navigation based on participant feedback.

Goal Prediction for NAC Breda

Breda, NL

DATA ANALYST — *Nov 2023 – Jan 2024*

- Built a machine learning model to predict football player performance for NAC Breda.
- Performed data processing, linear regression, and correlation analysis; delivered actionable recommendations.
- Ensured GDPR compliance throughout analysis.

Human Trafficking Data Analysis Dashboard (SDG 16)
Breda, NL

Developer, Data Analyst | *Sep 2023 – Nov 2023*

- Designed and developed an interactive Power BI dashboard to analyze global human trafficking patterns for SDG 16 (Peace, Justice and Strong Institutions).
- Performed data selection, cleaning, transformation, and exploratory analysis using international datasets.
- Visualized trends in detected victims by age, gender, type of exploitation, region, and year; calculated correlation coefficients to uncover key patterns.
- Communicated findings and actionable insights on demographic and regional vulnerabilities, contributing recommendations for prevention and policy.

Emotion Detection NLP Pipeline – Content Intelligence Agency
Breda, NL

MLOps Engineer, Developer | *May 2025 – Jun 2025*

- Developed and deployed a modular, production-ready emotion detection system to classify emotions (anger, disgust, fear, happiness, sadness, surprise) in video/audio content at the sentence level.
- Engineered a Python package with best practices (PEP8, modular code, logging, testing, Sphinx docs) and user-friendly CLI.
- Built and managed MLOps pipelines on Azure ML for automated data ingestion, training, retraining, and model deployment.
- Deployed secure APIs and interactive web/CLI interfaces for multi-user access and scalable cloud inference.
- Implemented continuous monitoring, logging, and CI/CD for seamless updates and model drift detection.
- Demonstrated advanced model lifecycle management: containerization (Docker), versioning, and rollback strategies.
- Delivered comprehensive documentation and a live demo; contributed to agile project planning, code reviews, and retrospectives using Azure DevOps.

Education

Breda University of Applied Sciences
Breda, Netherlands

Bachelor of Applied Data Science & Artificial Intelligence | *Sep 2023 – Present*

ITSTEP Academy
Offline / Kyiv, Ukraine

Python Developer Course | *2022 – 2023*

- Comprehensive 6-month, part-time course focused on Python programming and backend development.
- Studied Python fundamentals, OOP, data structures, file operations, exception handling, and algorithms.
- Practical training in databases (SQL, NoSQL), web development (Django), and cloud technologies.
- Learned asynchronous programming, networking, software testing, and version control with Git.
- Gained hands-on experience with building web applications, automation scripts, and client-server solutions.
- Received an international diploma upon completion.

Extracurricular Activity

Art Cafe Paperlo
Vyshneve, Kyiv, Ukraine

Manager | *2022 – 2023*

- Oversaw daily operations, coordinated staff schedules, and managed customer service in a high-traffic art cafe.
- Organized art events and contributed to the welcoming, creative atmosphere of the cafe.
- Organization: `https://paperlo.com.ua/`

Rudi.beauty Nail Salon
Vyshneve, Kyiv, Ukraine

Manager & Social Media Content Creator | *2022 – 2023, 2025*

- Managed front-desk operations, appointment scheduling, and client communication for a popular nail salon.
- Developed and published engaging content for Instagram and other platforms, increasing brand awareness and customer engagement.
- Assisted in 2025 with the creation and launch of a beginner course for aspiring nail artists.
- Organization: `https://www.instagram.com/rudi.beauty_/?utm_medium=copy_link`

Dobri Ruky Animal Shelter
Kyiv, Ukraine

Volunteer | *2023*

- Volunteered for 3 months, assisting with daily care, feeding, and socialization of shelter animals.
- Supported shelter operations and participated in adoption events to help animals find new homes.
- Organization: `https://dobri-ruky.com.ua/`

Skills

Python, HTML, SQL, Git, Power BI, Figma, Streamlit, VSCode 5
Machine Learning, Deep Learning, NLP, Computer Vision, Data Visualization, XAI 5

Languages

Russian (Native) 5
Ukrainian (Native) 5
English (C1) 4
French (B2) 4