CV

ORHAN AGAOGLU

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PERSONAL PROFILE

A software and machine learning engineer with hands-on experience building and deploying production AI systems. Adept at bridging the gap between academic research and real-world deployment, translating cutting-edge model architectures and generative AI techniques into scalable, production-ready solutions. Experienced with .NET, Python, Terraform, Google Cloud, and modern ML frameworks. Comfortable owning the full stack: from model evaluation and GPU deployment to CI/CD and scalable backend architecture.

EDUCATION

MSc Data Science and Artificial Intelligence Technology

Delft University of Technology, Delft, Netherlands · 2025–Present

- Specialization Themes: Advanced Machine Learning and Language & Speech Technology (NLP/ASR).
- Relevant Coursework: Machine and Deep Learning, Probabilistic AI, Natural Language Processing, and Inclusive Speech Technology.
- Research Focus: Machine Learning Theory

BSc Computer Science & Engineering

Delft University of Technology, Delft, Netherlands · 2021–2024

- Specialization in Multimedia Processing
- Minor in Heritage & Design (Faculty of Architecture and the Built Environment) – values-based analysis of built and urban heritage, working with concepts of authenticity, integrity, reversibility, and sense of place.
- Thesis: "How Does OpenAI's Whisper Interpret Dysarthric Speech?" – analysis of feature probing for pathological speech. (Write-up)

WORK EXPERIENCE

Software Developer / ML Engineer

Milvum · Den Haag, Netherlands · October 2024 – Present

- Developed backend services in .NET and Firestore, supporting production-ready features for a commercial shopping app.
- Integrated and optimized a Stable Diffusion–based Virtual Try-On (VTON) pipeline, preparing it for large-scale user-facing deployment.
- Architected and delivered end-to-end AI agent systems for municipalities — orchestrating planning, execution, and deployment of multi-step LLM-powered workflows with RAG pipelines and autonomous agents.
- Engineered multimodal RAG systems for ingestion of videos, text, and slide decks, with iterative LLM performance improvements and scalable cloud execution.
- Owned full-stack AI infrastructure — from GPU provisioning and model testing to containerized deployment via Cloud Run, Terraform, Docker, and CI/CD workflows.
- Performed technical analysis of model architectures and generative AI approaches for product integration.
- Key skills: .NET, C#, Firestore, Terraform, Docker, PyTorch, TensorFlow, Cloud Run, LangChain, LLM fine-tuning, Agentic AI.

Software Developer

Scenwise · Remote, Netherlands · April 2023 – June 2023

- Built indoor navigation features using ARCore and IndoorAtlas, mapping multiple campus buildings.
- Implemented mobile functionality with React Native and Viro-React.
- Documented system performance and delivered a technical report.

PROJECTS

Improving Medically Reliable Automated Auditory Perceptual Evaluation

Delft University of Technology · Delft, Netherlands · April 2023 – March 2024

- Under supervision of Zhengjun Yue, worked on automation of medical perceptual evaluation of pathological voice analysis through machine learning methods. (Related write-up)
- Analyzing different approaches on feature extraction and fusion.
- Technical skills: Python, Fast Fourier Transform, PyTorch, Keras, OpenSmile, SpeechBrain, High Performance Computing.
- Soft skills: Research, Time Management, Innovation, Academic Writing, Presentation skills.

Parkinson's Disease Detection from Voice

Machine Learning Research Project · Remote · Feb 2021 – May 2021

- Developed CNN-based models to detect Parkinson's disease from patient voice recordings.
- Automated dataset construction using audio scripting, preprocessing pipelines, and augmentation.
- Generated mel spectrograms using FFT and evaluated model performance with standard ML metrics.
- Presented results and co-authored a technical report.

Automated License Plate Recognition

Delft University of Technology · Delft, Netherlands · November 2022 – January 2023

- With a team of two, designed and implemented a system to automatically recognize the number/letter combination from license plates out of a video sequence.
- Designing the appropriate filters for image processing.
- Designing the process of recognition of plates and converting them to CSV file.
- Technical skills: Python, OpenCV, Pandas.
- Soft skills: Leadership, Teamwork, Problem Solving, Domain Knowledge.

SKILLS

PROGRAMMING

Python (PyTorch, TensorFlow, NumPy, Scikit-learn, OpenCV), C#, .NET, Java, SQL, Flutter, Dart

CLOUD & DEVOPS

Google Cloud, Firestore, Cloud Run, Terraform, Docker

TOOLS

Git, LaTeX, Tableau

SOFT SKILLS

Communication, Teamwork, Problem Solving, Time Management

INTERESTS

CREATIVE CODING

I enjoy exploring small creative projects with tools like Processing and p5.js.

D&D & AI

Playing D&D and developing an AI-driven DM system that automates the game.

VISUAL ARTS

I draw, sketch, and experiment expressions in visual forms.

COOKING

I enjoy experimenting with recipes and flavors as a way to unwind.

LANGUAGES

ENGLISH

Professional proficiency

DUTCH

Beginner, getting A2 by Spring

TURKISH

Native proficiency