Ebrahim Jahanshiri

AI/ML engineer

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PROFILE

I build machine-learning systems: language models that read documents and justify a score, deep-learning models on satellite imagery, and models that recover a heart rhythm from EEG. Recent work spans Google Cloud, PyTorch, and retrieval-augmented generation.

EXPERIENCE

R&D Engineer / Scientist — Chalmers University of Technology

Gothenburg, Sweden · November 2026 – present

- Machine learning for medical-device signals. HeartBrain recovers heart rhythm from multichannel EEG when no ECG channel is available.
- ECG-free heartbeat detection with independent component analysis and a quality score (median F1 0.94 on held-out recordings flagged by the score).

CTO and Lead Geospatial Deep Learning Engineer — AquaGuard Technologies AB

Sweden · January 2026 – October 2026

- Technical lead for Nexus, a maritime Earth-observation platform, from TRL 5 toward validated TRL 6/7. The project was first called Trident.
- Led SAR and optical ingestion, PyTorch and TensorFlow detection models, and inference APIs checked against a WebGIS dashboard.

AI Engineer (part time) — Ottomater

July 2024 – January 2026

- Built an evidence-based shortlisting service that ranks applicants from a job description and résumés, with a written justification per criterion.
- Retrieval-augmented criteria, LLM-as-judge scoring, and deployment on Google Cloud Run. Rankings are decision support for a recruiter.

Consultant Data Scientist (Data & AI) — CFF UK

Cambridge, UK · April 2025 – present

- Design and deliver data and AI products for the EU RADIANT project, including generative models deployed on GCP and AWS.

Data Science Manager — NIAB Ltd

Cambridge, UK · April 2023 – present

- Built a database of more than 500 European agronomic studies and a knowledge base on GCP.
- Shipped AiSQLquery, a retrieval-augmented extension, and an MLOps pipeline with MLflow and DVC.

Geospatial Data Scientist — Crops For the Future (CFF) UK CIC

Chelmsford, UK · May 2020 – April 2023

- Led the data work for the RADIANT Horizon 2020 project (220,000 euro) and suitability workflows on SQL, Google Earth Engine, and GIS.

Data Scientist (part time) — Chalmers University of Technology

Gothenburg, Sweden · December 2021 – July 2022

- Used spatial GANs to estimate soil properties where samples were missing. MSc thesis, University of Gothenburg.

Earlier roles

University of Nottingham, Kuala Lumpur, 2014–2020 · Universiti Putra Malaysia, 2003–2014 · National University of Singapore, 2008

- Led 24 specialists building the CropBASE apps under a 290,000 euro Horizon 2020 grant, and applied support vector machines to economic feasibility.
- Built software used by more than 10,000 farmers in Southeast Asia, spatial-regression tools for property valuation, and geostatistical mapping methods.

EDUCATION

- MSc Applied Data Science, University of Gothenburg and Chalmers, 2022
- PhD GIS and Geomatics Engineering, Universiti Putra Malaysia, 2013
- MSc Precision Farming, Universiti Putra Malaysia, 2008
- BSc Engineering, Ferdowsi University of Mashhad, 2000

SELECTED PUBLICATIONS

- Jahanshiri et al. Evaluation of global data for national-scale soil depth mapping. *Soil Systems*, 2026. Stacked ensemble of Random Forest, XGBoost, Cubist, and SVM.
- Jahanshiri. Improving soil information with generative and machine learning models. MSc thesis, University of Gothenburg, 2022. SpaceGAN.
- Oh, Chen, Jahanshiri, Isa, and Wong. Economic feasibility assessment using support vector machines. *Computers and Electronics in Agriculture*, 2020.
- Salama, Maul, Jahanshiri, Nizar, and Crout. Effective neural information retrieval in crop soil requirement classification. Conference paper.

SKILLS

Large language models (retrieval-augmented generation, LLM-as-judge, document understanding). Deep learning in PyTorch and TensorFlow. EEG and ECG, independent component analysis. SAR and optical imagery, Google Earth Engine. Docker, Cloud Run, GCP, DVC, MLflow. Python, SQL, PostgreSQL.