

Dr. Geevarghese George

Full-stack Data Scientist (Research + Engineering)
Austrian Work Permit: RWR Karte Plus

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Experience

- Jan. 2024 – present **Data Scientist, Engineering IT & Data Solutions, AVL List GmbH, Graz, Austria.**
- Implemented surrogate ML-based optimization algorithms for a major OEM, achieving up to 240× faster multi-objective design-space exploration.
 - Implemented graph attention networks (GAT) for transfer-path analysis to localize and trace sources of noise and vibration in automotive systems.
 - Implemented and integrated a standards-compliant dataspace as part of SM4RTENANCE (EU project), to power end-to-end ML workflows for predictive maintenance.
 - Applied causal discovery and effect-estimation methods to uncover relationships in complex mobility time series data.
- May 2022 – Dec. 2023 **Machine Learning Researcher, Medical Image Analysis & AI Research Center, Danube Private University GmbH, Krems, Austria.**
- Developed and maintained an in-house ML library for feature selection and ablation studies, which led to 3+ peer-reviewed publications in high-impact biomedical imaging journals.
 - Designed and delivered training sessions for medical-students on LLM & RAG workflows to accelerate literature-review processes.
 - Mentored interns and collaborators on state-of-the-art 3D DL architectures for medical-image segmentation and classification tasks.

Skills

Domains	Machine Learning, Computer Vision, Time-series Analysis, Multi-objective Optimization
Frameworks	PyTorch (Lightning, fastai), scikit-learn, Optuna, FastAPI, Docker, Kubernetes
Languages	Python, C++, Bash, \LaTeX
Tools	Git, CI/CD, Postman, VS Code, Vim, *nix

Personal Projects

[\[github.com/thatgeeman\]](https://github.com/thatgeeman)

Developed a WhisperX-based transcription and diarization pipeline enhanced with Llamaindex/LangChain and local Ollama serving for vector-database retrieval, enabling context-aware speaker segmentation and queryable audio archives.

Developed a prompt-injection PoC for LLM-based CV screening, exposing vulnerabilities in Google Gemini's recommendation logic.

PyTorch re-implementation of “*Anomaly Detection for Time Series Using VAE-LSTM Hybrid Model*” (ICASSP 2020), porting the original TensorFlow code for probabilistic latent-space analysis and anomaly scoring.

PyBx – Python library for anchor box generation in object-detection tasks; used for CV model prototyping.

Education

- 2017 – 2021 **Ph.D. in Computational Physics, Institut Charles Sadron (CNRS) & University of Strasbourg, Strasbourg, France.**
Thesis on *Rheological properties of freestanding polymer films*.
Available at theses.hal.science/tel-03273346v1
- 2015 – 2017 **M.Sc. in Polymer Science, University of Freiburg, Freiburg, Germany.**
Erasmus+ exchange at the University of Strasbourg.

2010 – 2014 **B.Tech. in Polymer Science & Engineering**, *Cochin University of Science and Technology*, Kochi, India.

Selected ML Publications

[\[full list\]](#)

Automating battery diagnostics with data-driven MLOps on European dataspace. Rathee, A.; [George, G.](#); Koutroulis, G.; Živadinović, M.; Schagerl, G.; Peischl, B. Presented and published at the *FISITA World Mobility Conference 2025*, Barcelona.

Image normalization techniques and their effect on the robustness and predictive power of breast MRI radiomics. Schwarzhans, F.; [George, G.](#); Zaric, O.; Woitek, R.; et al. *European Journal of Radiology* (2025).

Breast MRI radiomics and machine-learning-based predictions of response to neoadjuvant chemotherapy. Hatamikia, S.; [George, G.](#); Schwarzhans, F.; Mahbod, A.; Woitek, R. *Comput. Struct. Biotechnol. J.* (2024).

Machine-learning-based contrast-enhancement and IDH-status prediction of gliomas using 7 T MR spectroscopic imaging. Schwarzhans, F.; [George, G.](#); et al. Presented and published in the proceedings of the *ISMRM 2024*, Singapore.

Languages

English	C2 – TOEFL (2014)
German	B1 – ongoing lessons
French	B1 – Test de Français International (2020)
Malayalam	Native

Professional Service & Achievements

Technical reviewer for *Cancer Imaging*, *European Radiology*, Manning Publications (LLMs & AI), and Packt.

Winner, “Ma thèse en 180 s” — ICS (2019).