

EDUARDO GADE GUSMAO

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SUMMARY

Research Engineer with 8+ years of experience building machine learning systems for genomics, multi-omics, and biomedical data. Specialised in ML research prototypes, large-scale data pipelines, and reproducible systems bridging computational biology and production engineering. Eager to advance the field of biomarker discovery, drug design, and precision medicine.

PROFESSIONAL EXPERIENCE

Technical University of Munich SENIOR ML RESEARCHER & APPLIED SCIENTIST – Freising, Germany	Apr 2024 – Present
University of Turku SENIOR ML ENGINEER – Turku, Finland	Mar 2022 – Apr 2024
Gottigen University Medical Hospital SENIOR BIOINFORMATICS & ML ENGINEER – Gottingen, Germany	Jan 2020 – Mar 2022
Dana-Farber Cancer Institute SENIOR BIOINFORMATICS SCIENTIST – Boston, USA	Jan 2018 – Jan 2020
Harvard T.H. Chan School of Public Health ML RESEARCHER – Boston, USA	Jun 2015 – Jan 2018

EDUCATION

Harvard Medical School – Boston, USA Doctor of Philosophy in Biomedical Informatics	2018
RWTH Aachen University – Aachen, Germany Doctor of Philosophy in Life Sciences	2015
Federal University of Pernambuco – Recife, Brazil Master of Science in Machine & Deep Learning	2011
Federal University of Pernambuco – Recife, Brazil Bachelor of Science in Computer Science	2010

SELECTED TECHNOLOGIES

Programming Languages: Python, R, Bash/Shell, C/C++, Java, JavaScript, Go, Julia
ML Tools and Frameworks: Pytorch, Tensorflow, JAX, GATK, Pysam, Bioconductor
Bioinformatics Ops: GATK, nf-pipelines, Samtools, Bedtools, Vcf-tools, RDKit, OHDSI/OMOP
Version Control & Packaging: Git, Github, Ruff, Conda, Mamba, PyPI, Pyright
Data Operations & CI/CD: Snakemake, Nextflow, PostgreSQL, MongoDB, Github Actions
Advanced DB, Containerization & Orchestration: Redis, Databricks, Docker, Kubernetes
HPC, Cloud & Monitoring: SLURM, AWS, Grafana, Prometheus, Jira, Slack

SELECTED RESEARCH

Merz S, et al.	<i>Cell Reports</i>	43(11): 114853	2024
Tran K, Lang J, Compton K, et al.	<i>The Lancet</i>	400(10352): 563	2022
Breast Cancer Assoc. Consortium	<i>New England Journal of Medicine</i>	384(5): 428	2020
CRyPTIC and 100K Genomes	<i>New England Journal of Medicine</i>	379(15): 1403	2018
Gusmao E, et al.	<i>Nature Methods</i>	13(4): 303	2016