

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, Vcftools, 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