

Dany Mukesha

Portfolio: dynamukesha.github.io
LinkedIn: [linkedin.com/in/dany-mukesha](https://www.linkedin.com/in/dany-mukesha)

Email: dynamukesha@gmail.com
Mobile: +41-767-985-478 / +39-366-709-56692

EDUCATION

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- **Université Côte d'Azur** Nice, France
• *PhD, Bioinformatics* Sept. 2023 – July 2026 (Expected)
 - **University of Rome Tor Vergata** Rome, Italy
• *MSc, Bioinformatics* March 2020 – July 2023
 - **Sapienza Università di Roma** Rome, Italy
• *BSc, Bioinformatics* Nov. 2016 – Oct. 2019

SKILLS

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- **Programming Languages:** Python, R, C++, Java, Bash, SQL
 - **Bioinformatics:** Genomics, transcriptomics, GWAS, metabolomics, proteomics, single-cell analysis
 - **Machine Learning (ML):** Regression, clustering, neural networks, Gaussian processes, feature selection, PCA/ICA, random forests, Bayesian methods, cross-validation
 - **Tools & Platforms:** Nextflow, Snakemake, Docker, Kubernetes, Git, HPC (Slurm/PBS), Linux, AWS, Azure
 - **Databases:** PostgreSQL, MySQL, Oracle, MongoDB
 - **Languages (Spoken):** English, Italian, French

EXPERIENCE

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- **Université Côte d'Azur** Nice, France
• *PhD Researcher* Sept. 2023 – Present
 - **Alzheimer's Disease Biomarkers:** Implement ML models integrating serum metabolomics, MRI, PET, and genetic data for early AD detection using large-scale cohorts (such as ADNI: NCT00106899)
 - **Multi-omics Integration:** Built pipeline for analyzing metabolomic and genomic data with 90%+ classification accuracy for differential diagnosis between AD and Lewy body dementia
 - **Wayne State University** Detroit, MI, USA (Remote)
• *Bioinformatician* March 2022 – Sept. 2023
 - **Toxicogenomics:** Performed gene expression (RNA-seq) analysis of environmental toxins on cardiovascular health
 - **Accenture Spa - Catenate Group** Rome, Italy
• *Software Engineer* Jan. 2021 – Sept. 2023
 - **Full-Stack Development:** Built Java microservices and Angular/React frontend applications for enterprise clients
 - **DevOps:** Implemented CI/CD pipelines with Jenkins, Docker, Kubernetes; managed LDAP and network configurations
 - **The University of Manchester** Manchester, UK (Remote)
• *Bioinformatician* Dec. 2020 – Aug. 2021
 - **Epigenetics & GWAS:** Integrated epigenetic data with GWAS to map Rheumatoid Arthritis risk loci, identifying novel regulatory variants
 - **Policlinico Agostino Gemelli IRCCS** Rome, Italy
• *Bioinformatician* July 2020 – Dec. 2020
 - **Transcriptomic Profiling:** Analyzed RNA-seq data from ependymoma tumors; results published in International Journal of Molecular Sciences

SELECTED PUBLICATIONS

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- **Journal Article:** Mukesha D, Firat H, Sacco G. Integrating large-scale serum metabolomics and APOE ε4 genotype for non-invasive Alzheimer's detection. *J Alzheimers Dis.* 2025; DOI: 10.64898/2025.12.29.25343146
 - **Journal Article:** Mukesha D, Sarter M, Dubray M, et al. Targeted serum metabolomic profiling and machine learning in Alzheimer's disease using ADDIA cohort. *J Alzheimers Dis.* 2025; DOI: 10.1177/13872877251378653
 - **Conference:** Mukesha D, et al. Metabolomic signatures and ML models for distinguishing AD and dementia with Lewy bodies. *AAIC.* 2025; DOI: 10.1002/alz.70863..110610
 - **Book:** Mukesha D. *R for Proteomics:* From QC to functional analysis. 2025. Online
 - **Software:** Mukesha D. Scalable Genetic Algorithm Framework for High-Throughput Genomic Data. Zenodo. 2024

CONFERENCES & AWARDS

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- **AD/PD 2026:** Invited talk: Urinary biomarkers differentiating AD from Lewy body dementia. Copenhagen, Denmark
 - **AAIC 2025:** Poster presentation. Toronto, Canada
 - **AD/PD 2025:** Poster presentation. Vienna, Austria
 - **Marie Curie PhD Scholarship:** EU Horizon 2020 (2023–2026)
 - **LazioDisco Scholarship:** Academic merit scholarship (2016–2022)