

Bioinformatics Specialist

Switzerland, Full-time

About SmartGene

SmartGene is an established leader in biotech innovation, developing SaaS solutions for genetic data analysis. We work at the forefront of pathogen identification and genomic analytics, supporting applications in clinical diagnostics and biopharma quality control.

The Role

We are seeking a skilled Bioinformatics Specialist to support and advance SmartGene's bioinformatics operations. You will maintain existing and build new production pipelines for sequence identification, develop tools for interpreting genetic and genomic data across sequencing platforms, and ensure reliable, reproducible analysis workflows that support downstream clinical interpretation.

The role combines pipeline maintenance and software development with close collaboration with customer support and IT colleagues.

Impact of the Role

The Bioinformatics Specialist is a critical member of the team, ensuring accurate and timely genomic analysis and pathogen identification. Your work contributes directly to evidence-based decisions in the target applications.

Key Responsibilities

Pipeline Maintenance & Operations

- Maintain and monitor existing bioinformatics pipelines used in diagnostic workflows
- Ensure reliable processing of NGS and Sanger Sequencing data
- Troubleshoot pipeline failures, optimise performance, and ensure reproducibility and traceability
- Drive timely updating of curated reference databases
- Maintain technical documentation and version control for production pipelines

Tool & Pipeline Development

- Design and implement computational workflows for detection of viruses, bacteria, and fungi
- Develop tools and scripts for sequence processing, taxonomic classification, and genomic comparison
- Build automated workflows using Python, R, and Bash
- Provide bioinformatics input for diagnostic reports and pathogen identification guidance

Collaboration

- Work closely with IT and customer management colleagues to resolve technical and customer questions
- Contribute to the evaluation and validation of new applications and bioinformatics workflows

Infrastructure & Data Management

- Maintain computational environments and ensure pipelines run efficiently on Linux and HPC systems
- Manage sequencing data, reference databases, and analysis outputs in line with data governance and regulatory standards

Qualifications & Experience

Required

- MSc or PhD in Bioinformatics, Computational Biology, Genomics, or a related discipline
- Experience with sequencing technologies (NGS, Sanger), sequence alignment and comparison tools
- Experience building and maintaining rules-based algorithms, reference datasets, and profile-based pipelines
- Strong programming skills in Python (including data analysis and visualisation) and Bash scripting
- Knowledge of coding and release procedure standards
- Demonstrated experience in a Linux environment
- Excellent written and verbal communication skills in English
- Highly motivated, able to work independently within an interdisciplinary team
- This role requires a valid Swiss work permit

Nice to Have

- Knowledge of PERL
- Experience with high-performance computing (HPC) environments

Why SmartGene?

- Work at the forefront of biotech innovation with an established leader in the field
- Shape the future of genetic data analysis through cloud-based software solutions
- Join a collaborative, growing team with a meaningful mission in healthcare and diagnostics

How to Apply

Share your CV and a few lines about your motivation with us:

contact@smartgene.com