Michael **Patron**

Profile Summary

Junior bioinformatician with 2 years of experience specializing in single-cell RNA sequencing (scRNA-seq) and Spatial Transcriptomics (ST), including quality control, data processing, and visualization. Proficient in R and Python for data analysis, regularly utilizing tools such as Seurat for genes marker analysis and heatmap generation. Experienced in working on HPC clusters with Slurm as a job scheduler, and skilled in workflow management using Nextflow and Snakemake. Comfortable documenting analyses and results in Markdown for reproducibility and collaboration

Contact details

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Personal information

Citizenship: **French**
Languages: **English**

Referee

- Denis PUTHIER
- Olivier CHABROL
- Sophie DUPUY-CHESSA

Experience

Bioinformaticien at *Institut de Recherche en Cancérologie de Montpellier (IRCM), France.*   **2023.10–Now**

◇ Collected, cleaned, and processed large datasets from multiple sources to ensure data accuracy and integrity.

◇ Conducted exploratory data analysis to identify differentially expressed genes, expression patterns, and significant pathways using statistical methods and data visualization techniques.

◇ Maintained automated data pipelines for efficient data extraction and transformation using R and Python.

◇ Developed interactive and static applications for data visualization and light processing tasks.

◇ Analyzed scRNA-seq data, including production of raw count matrices, quality control, and downstream analysis using R, primarily with Seurat and SeuratExtend pipelines.

◇ Implemented machine learning pipelines, including Random Forest and Lasso, for classification and feature selection.

◇ Analyzed spatial transcriptomics data generated by Visium/Xenium platforms from 10X Genomics.

Education

Master of Bioinformatic Software development and data analysis) *from Marseille University.*   **2021–2023**

University Diploma of technology, Special year, of Computer Science *from Grenoble Alpes University.*   **2020–2021**

Life Sciences Degree *from Nîmes University.*   **2017–2019**

Skills

Programming Language :   • R   • Python   • Markdown

HPC :   • IFB (HPC) core cluster   • Genotoul-Bioinfo (HPC) cluster   • Slurm WorkLoad Manager

IDE Software :   • RStudio   • Pycharm   • Visual Studio Code

Git repository :   • GitHub   • GitLab

Workflow/Pipeline :   • Snakemake   • Nextflow