

KAI WALDRANT

BIOINFORMATICIAN - DATA SCIENTIST - WORKFLOW ENGINEER - FRONT-END DEVELOPER

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PROFILE

Bioinformatician with a practical background in data analysis pipelines, workflow automation, and cloud deployment. Recent work includes contributions to single-cell RNA-seq analysis, development with tools like Nextflow and Viash, and CI/CD integration using GitHub Actions and Argo Workflows. I enjoy learning new technologies and applying them to real-world problems, and I'm comfortable collaborating across technical and scientific teams in both research and industry environments.

SKILLS

Languages: **Dutch, English**

Programming: **Python, R, Bash**

Workflow & automation: **Nextflow, Docker, Viash, Github actions, Argo Workflows**

Cloud Platforms: **AWS, GCP**

Front-End: **HTML, CSS, SolidJS, Typescript**

Data & Tools: **Git, Quarto, Flask, MySQL, PHP, Perl**

EXPERIENCE

Bioinformatics workflow developer @ Data intuitive

Nov 2022 – Jan 2025

- Refactored and optimized benchmark pipelines using **Viash, Nextflow, Python, R, Bash** and containerized tools.
- Built dynamic benchmarking result websites using **Quarto (R, Python, Bash)** and **SolidJS/TypeScript**.
- Deployed scalable compute resources for **Nextflow** on **AWS Batch** and **GCP Batch**.
- Contributed to CI/CD setup for **Viash** packages using **GitHub Actions, Kubernetes**, and **Argo Workflows**.

Bioinformatician consultant @ Science talents

Jul 2021 – Mar 2022

- Automated SARS-CoV-2 sequencing data analysis pipelines using **Python**.
- Built a complete NGS framework, including a custom **Flask** frontend and user management system.
- Managed sequencing data lifecycle and supported lab implementation of **Illumina MiSeq**.

Application Developer @ Sonic Healthcare Benelux (AML)

Nov 2020 – Jul 2021

- Developed **PHP/MySQL** application solutions.

- Recovered and rebuilt critical **PHP/MySQL** applications after a major cyberattack.

Bioinformatician @ Agilent Technologies

Sep 2018 – Oct 2020

- Developed and maintained pipelines for NGS diagnostics under **ISO17025** standards and R&D using **Perl, R** and **MySQL**.
- Supported both **R&D and production pipelines**
- Implemented secure **AWS**-based backup solutions for **data integrity**.

Lab technician @ Agilent Technologies

May 2015 – Oct 2020

- Set up an **ISO17025**-accredited lab for routine diagnostics.
- **Validated** laboratory instruments and software systems.

Lab technician @ CMPG, KU Leuven

Feb 2013 – Apr 2015

- Assisted in Microbiological research in academic setting.

EDUCATION

Advanced Bachelor Bioinformatics

Hogeschool West-Vlaanderen, 2017 – 2018

Internship: Quality trending platform for Illumina MiSeq, MiniSeq and NextSeq instruments. *Agilent Technologies*

Post Graduate Bioinformatics

Hogeschool West-Vlaanderen, 2012 – 2015

Bachelor Pharmaceutical and Biological Laboratory Techniques

Plantijn Hogeschool, 2009 – 2012

Internship: synthesis and biological activity of new multi-target naphthalimide and bisnaphthalimide derivatives. *Robert Gordon University, Scotland*

INTERESTS

Home renovation enthusiast, Woodworker, travel photographer, fantasy book reader, cinema-goer, and aspiring chef. Passionate about exploring new technology trends. Most importantly, I cherish time with my wife and two lovely daughters.

AWARDS & CERTIFICATIONS

- ✓ Workplace first aid (Rode kruis) and evacuation steward
- ✓ BVLT vzw 2011-2012 for best thesis (Plantijn Hogeschool)