

# 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.

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## SKILLS

### Languages

Mother Tongue: Dutch  
Fluent: English

### Programming skills and tools

Python, R, Bash, Nextflow, Docker,  
Viash, Git(hub), AWS, GCP, Argo  
workflows (CI/CD)

### Front-end development

HTML, CSS, SolidJS, Typescript

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## 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 a dynamic benchmarking results website using **Quarto**, **Python**, **R** and **Bash**.
- Built a second dynamic benchmarking results website using **SolidJS** and **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 (ZNA Middelheim)

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 @ Multiplicom

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 data backup protocols using **AWS**.

### Lab technician @ Multiplicom

May 2015 – Oct 2020

- Set up **MASTR Facility**, an ISO17025-accredited lab
- Performed routine genetic testing, validated equipment and software systems.

### Lab technician @ CMPG, KU Leuven

Feb 2013 – Apr 2015

- Assisted in Microbiological research in academic setting.

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## EDUCATION

### Advanced Bachelor Bioinformatics

Hogeschool West-Vlaanderen, 2017 – 2018

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

*Multiplicom*

### 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*

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## INTERESTS

Apart from being a programmer and web developer, I am also an aspiring builder (Home renovation). My love for travel can be perfectly combined with acting as a photographer.

When forced indoors, I like to read fantasy books, love going to the cinema with my wife, be an aspiring chef, and spend some of my free time exploring the latest technology advancements (read: watching YouTube, reading articles and gaming).

But the most important interests are my 2 lovely daughters and wife!

## AWARDS & CERTIFICATIONS

- ✓ Workplace first aid (Rode kruis) and evacuation steward
- ✓ BVL1 vzw 2011-2012 for best thesis (Plantijn Hogeschool)