

KAI WALDRANT

BIOINFORMATICIAN - DATA SCIENTIST

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PROFILE

I am a bioinformatician with expertise in data flow automation and analysis pipelines. My recent experience includes Single Cell RNA-Seq data analysis through open-source projects (Open Problems, Open Pipelines), Docker containerization and Nextflow workflows within the Viash framework, and CI/CD implementation with GitHub Actions and Argo Workflows for Kubernetes. I also expanded my skill set into front-end development using SolidJS and TypeScript. Passionate about learning, I thrive on exploring new technologies (e.g. backend software development) and advancing innovative data analysis methods.

SKILLS

Languages

Mother Tongue: Dutch
Fluent: English

Programming skills and tools

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

Front-end development

HTML, CSS, SolidJS, Typescript

EXPERIENCE

○ **Bioinformatics workflow developer @ Data intuitive**

November 2022 – January 2025

Open Problems – CZI:

- Refactor benchmarking package to use Viash. (Python, R and bash)
- Optimize existing benchmark task methods.
- Create dynamic website for benchmarking results and documentation. (Quarto, python, R, bash, Observable JS)
- Setup AWS batch as compute resource for Nextflow benchmarking workflows.

Data Intuitive:

- Help develop CI for Viash packages on Kubernetes with Argo workflows.
- Setup GCP batch as compute resource for Nextflow workflows.

○ **Bioinformatician consultant @ Science talents**

July 2021 – March 2022

ZNA Middelheim (July 2021 – March 2022)

- Automate data analysis for sars-cov-2 NGS.
- Create Framework for sequencing data analysis (Python): pipelines, user frontend (flask).
- Data management of sequencing data.

- Implementation of Illumina MiSeq instrument.
 - **Application Developer @ AML, Sonic Healthcare Benelux**
November 2020 – July 2021
 - Develop application solutions (PHP/MySQL, Jira).
 - Restart IT business after cyber-attack: Analyze and restore existing PHP/MySQL applications
 - **Bioinformatician @ Multiplicom, a part of Agilent Technologies**
September 2018 – October 2020
 - Maintain and update existing and create new pipelines for data processing and analysis of sequencing data for R&D and ISO17025 environment (Perl, R & MySQL).
 - Troubleshooting pipeline issues.
 - Data backup in AWS.
 - **Lab technician @ Multiplicom, a part of Agilent Technologies**
May 2015 – October 2020
 - Setting up ISO17025 accredited laboratory (MASTR Facility).
 - Perform genetic testing on samples (multiplex PCR, DNA sequencing).
 - Validation of methods, equipment, and computerized systems
 - **Lab technician @ CMPG, Katholieke Universiteit Leuven**
February 2013 – April 2015
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EDUCATION

Advanced Bachelor Bioinformatics

2017 – 2018

Hogeschool West-Vlaanderen, Rijselstraat, Brugge

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

Multiplicom, a part of Agilent Technologies

Post Graduate Bioinformatics @ Home

2012 – 2015

Hogeschool West-Vlaanderen, Rijselstraat, Brugge

Bachelor Pharmaceutical and Biological Laboratory Techniques

2009 – 2012

Plantijn Hogeschool, Department of Applied Science and Education, Antwerpen

Internship: synthesis and biological activity of new multi-target naphthalimide and bisnaphthalimide derivatives.

Robert Gordon University, School of Pharmacy and Life Science, Aberdeen, Scotland

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
- ✓ BVLТ vzw 2011-2012 for best thesis (Plantijn Hogeschool)