



# Jan C. Brammer

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## Summary

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- 5+ years of professional experience in developing open source software on multiple projects and distributed agile teams.
- Comfortable with legacy code-bases and green-field projects.
- Experience "beyond" the ticket: user interviews, requirement analyses, documentation.
- I care about the big picture: managing technical debt, automatization, refactoring.
- I strive to be a pragmatic generalist.
- Culture and context permitting, I love writing code that is simple, functional (the [paradigm](#)) and easy to delete.

## Experience

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### Software developer / RWTH Aachen University / 2021-present

I work on open source data-management tools for chemists under the umbrella of the [NFDI4Chem](#) initiative, collaborating with a distributed team of developers and chemists.

#### **Chemotion ELN**

An open source electronic lab notebook for chemists. While implementing new features, I conducted user interviews, analyzed and scoped requirements, wrote code, tests, and documentation. I also reviewed pull requests, improved and maintained our CI, and reduced technical debt by increasing test coverage, removing dead code, and refactoring parts of the codebase (the latter two being my favorite).

##### **Technologies**

Javascript, React, Ruby (on Rails), PostgreSQL, Docker, GitHub Actions, GitHub Copilot, VSCode

##### **Links**

[https://github.com/ComPlat/chemotion\\_ELN](https://github.com/ComPlat/chemotion_ELN)

#### **InChI & TUCAN**

Open source identifiers for chemical molecules. These identifiers are to molecules what [ISBN](#) is to books. I developed an extensive test suite and CI for [InChI](#), a legacy C library that is fundamental to commercial and academic chemistry. I also contributed significantly to moving InChI's development to GitHub. TUCAN is a prototype that addresses some of InChI's shortcomings for inorganic chemistry.

##### **Technologies**

Python (pytest, pydantic, ctypes, networkx), bash, SQLite, Docker, GitHub Actions, GitHub Copilot, VSCode

##### **Links**

<https://github.com/IUPAC-InChI/InChI>, <https://doi.org/10.1039/D4FD00145A>, <https://github.com/TUCAN-nest/TUCAN>, <https://doi.org/10.1186/s13321-022-00640-5>



## **Staff scientist / Radboud University Nijmegen / 2017-2021**

I worked in research and development at the intersection of behavioral- and neuroscience. My tasks ranged from software development and data science to experiment design, and the publication of scientific articles.

### **Biofeedback application development**

A virtual reality training to help Dutch police officers regulate acute stress. International, interdisciplinary collaboration of scientists, designers, game developers, and police. I integrated heart and breathing sensor data into the application, ran extensive user tests, and analyzed requirements. I am no longer on this project, but I keep maintaining the codebase as a personal project.

#### **Technologies**

PySide6 (Qt for Python), Redis, Bluetooth

#### **Links**

<https://github.com/JanCBrammer/OpenHRV>, <https://doi.org/10.3389/fpsyg.2021.586553>

### **Biopeaks**

A graphical user interface for the interactive analysis of physiological sensor data. Our lab needed a tool to inspect, clean, and extract features from physiological data.

#### **Technologies**

PySide6 (Qt for Python), Python (numpy, scipy, pandas, matplotlib, pytest)

#### **Links**

<https://github.com/JanCBrammer/biopeaks>, <https://doi.org/10.21105/joss.02621>

## **Skills**

- (open source) software development
- writing (e.g., technical documentation, scientific articles)
- conducting scientific studies (e.g., experiment design, data- acquisition and analysis)
- data science (e.g., wrangling, visualization, inferential statistics, basic predictive modelling)
- physiological sensor data (e.g., electrocardiogram, photoplethysmography, breathing)
- basic [chemical informatics](#)

## **Education**

**MSc Cognitive Neuroscience**, Maastricht University, 2015-2017

**BSc Psychology**, Maastricht University & Concordia University Montreal, 2012-2015