


# Alexandre CIRILO

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I have a background in Computer Science and Biochemistry. I love all things coding – on my free time, I develop free open-source software (FOSS) of my own. I consider myself a critical person, always questioning the way of doing things, as well as being receptive to constructive criticism, and always eager to learn new concepts.

## SKILLS

Programming languages	Python, JavaScript/TypeScript, R, Rust
Frameworks	FastAPI, Nuxt, Vue
Databases	PostgreSQL, SQLite
Development tools	Visual Studio Code, RStudio, Zed
Operating systems	Linux, macOS, Windows
Others	Bitbucket, Docker, Git, GitHub, GitHub Actions, Grafana, Jenkins, Jira, Kafka, Kubernetes, Sentry

## EXPERIENCE

Today September 2023	<b>Software Engineer, KPN, Amsterdam</b> <ul style="list-style-type: none"><li>Event-streaming (Kafka)<ul style="list-style-type: none"><li>Built a full-stack web application to handle malformed events that end up in dead letter queue (DLQ) Kafka topics and republish them to other topics</li></ul></li><li>Backend development<ul style="list-style-type: none"><li>Addition of new features to the backend of kpn.com, as well as maintenance and monitoring</li></ul></li></ul> <div><span>Python</span> <span>JavaScript/TypeScript</span></div>
August 2023 October 2021	<b>Bioinformatician, BASECLEAR, Leiden</b> <ul style="list-style-type: none"><li>Standard and custom data analysis</li><li>Development of custom tools and pipelines</li><li>Data visualization and analysis (NumPy, Pandas, Matplotlib, Seaborn, ggplot2)</li><li>Unit testing (pytest)</li><li>Running pipelines on a HPC (High Performance Cluster)</li></ul> <div><span>Python</span> <span>R</span> <span>Nextflow</span></div>

## LANGUAGES

English	● ● ● ● ●
French	● ● ● ● ●
Portuguese	● ● ● ● ●
Spanish	● ● ● ○ ○
Dutch	● ○ ○ ○ ○

## STRENGTHS

- Can-do attitude
- Committed
- Curiosity-driven
- Enthusiastic
- Flexible

## EDUCATION

2018 - 2021	M.Sc. in Computer Science	Faculty of Sciences, University of Leiden (the Netherlands)
2016 - 2018	M.Sc. in Biochemistry	Faculty of Sciences, University of Lisbon (Portugal)
2011 - 2016	B.Sc. in Biochemistry	Faculty of Sciences, University of Lisbon (Portugal)

## PROJECTS

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### APPLE-HEALTH-PARSER

2024

 [github.com/alxdrcirilo/apple-health-parser](https://github.com/alxdrcirilo/apple-health-parser)

Python package to parse, analyse, and plot Apple HealthKit data .

[Python](#) [Data processing](#) [Data visualisation](#)

### CHECKERS

2023

 [github.com/alxdrcirilo/checkers](https://github.com/alxdrcirilo/checkers)

Checkers game with alpha-beta pruning implementation for the AI player.

[Python](#) [Reinforcement learning](#) [Alpha-beta pruning](#)

### HEX

2020

 [github.com/alxdrcirilo/hex](https://github.com/alxdrcirilo/hex)

Built a Hex board game with Monte with an AI player using the Monte Carlo tree search (MCTS), a heuristic search algorithm.

[Python](#) [Reinforcement learning](#) [MCTS](#)

### RAMACHANDRAW

2019 - 2020

 [github.com/alxdrcirilo/ramachandraw](https://github.com/alxdrcirilo/ramachandraw)  <https://pypi.org/project/ramachandraw/> RamachanDraw PyPI

RamachanDraw is a tool used to draw a Ramachandran plot based on the input PDB file. It makes use of a Gaussian KDE (kernel density estimation) to plot the density of favoured torsion angles ( $\phi$  and  $\psi$ ). This Python package has already been downloaded more than [20k](#) times and cited in literature [Choudhuri 2022; Liang et al. 2022; Schuurs et al. 2023; Xiong et al. 2022].

[Python](#) [Bioinformatics](#)

## CERTIFICATIONS

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JavaScript Algorithms and Data Structures

**Issued:** January 2023

**Verification code:** [freeCodeCamp](#)

Back End Development and APIs

**Issued:** February 2023

**Verification code:** [freeCodeCamp](#)

Relational Database

**Issued:** June 2023

**Verification code:** [freeCodeCamp](#)