

# Alexandre CIRILO



<https://alxdrcirilo.dev>  
[linkedin.com/in/alxdrcirilo](https://www.linkedin.com/in/alxdrcirilo)  
[github.com/alxdrcirilo](https://github.com/alxdrcirilo)  
Amsterdam, Netherlands  
Born July 28<sup>th</sup> 1993

I have a background in Computer Science and Biochemistry. I love all things coding – on my free time, I develop open-source software 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, R, JavaScript, Nextflow  
**Databases** PostgreSQL  
**Development tools** Visual Studio Code, PyCharm, RStudio  
**Operating systems** Linux (Fedora), Windows, macOS  
**Others** Bitbucket, Git, GitHub Actions, Jira

## EXPERIENCE

**Today**  
**September 2023** | **Software Engineer, KPN, Amsterdam**  
> Tech Talent Program  
> Event-streaming  
Python JavaScript Visual Studio Code

**August 2023**  
**October 2021** | **Bioinformatician, BASECLEAR, Leiden**  
> Standard and custom data analysis  
> Development of tools and pipelines  
> Data visualization and EDA (NumPy, Pandas, Matplotlib, Seaborn, ggplot2)  
> Unit testing (pytest)  
> Version control (git, Bitbucket)  
> Running pipelines on HPC (High Performance Cluster)  
Python R Nextflow Visual Studio Code RStudio JIRA Bitbucket

## 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

---

### 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 [13k](#) times and cited in literature [Choudhuri 2022; Liang et al. 2022; Schuurs et al. 2023; Xiong et al. 2022].

[Python](#) [PyPI](#) [PyCharm](#)

### 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](#) [Visual Studio Code](#) [Reinforcement learning](#) [MCTS](#)

### UNIGET

2022

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

UniGet is a tool written used to search, filter, and fetch records from the UniProt database.

[Python](#) [Visual Studio Code](#) [PyQt5](#)

### CHECKERS

2023

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

Currently working on building a checkers game with MCTS implementation and planning to use deep Q-learning to train a competitive model for an AI player based on the MCTS dataset.

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

## CERTIFICATIONS

---

JavaScript Algorithms and Data Structures	<b>Issued:</b> January 2023	<b>Verification code:</b> <a href="#">freeCodeCamp</a>
Back End Development and APIs	<b>Issued:</b> February 2023	<b>Verification code:</b> <a href="#">freeCodeCamp</a>
Relational Database	<b>Issued:</b> June 2023	<b>Verification code:</b> <a href="#">freeCodeCamp</a>