Jelmar Gerritsen

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About me

I'm a driven researcher with a broad academic background. My extensive experience in software engineering allows me to bridge the gap between theoretical research and practical implementation while writing clean and maintainable code. I have expertise in numerical modeling, remote sensing, machine learning and astrodynamics.

Education

MSc Aerospace Engineering — 2021 - present
TU Delft

Track: Planetary Sciences. Course/grade list available upon request. *GPA:* 7.5/10

BSc Physics & Astronomy — 2016 - 2021
Radboud University

Minors: Astronomy, Climate science. Also completed 2 semesters towards a BSc in Computer Science. *GPA:* 7.0/10

Experience

Programming teacher — April 2021 - May 2021
Stanford University, online

I was a section leader for Standford Code In Place, where I taught Python to an international class of 10 students for around 5 weeks.

Projection technician — January 2020 - June 2021
Stichting LUX

I was responsible for daily cinema operations, scheduling and maintenance.

Teaching assistant — Winter 2019
Radboud University

Course taught: Energy & Sustainability. I designed my own case study on the renewability of a campus building for the students to take on.

Badger keeper — October 2018 - January 2020
Stichting Das & Boom

I volunteered at a shelter for resuce badgers. In addition, I developed a software app using GIS and React for logging & visualising roadkill casualties to aid in conservation efforts.

Skills

Python | C++ | Julia | Rust | TypeScript | MATLAB | React | GIS | PyTorch

Achievements

IAC paper selection — 2024

My first author paper *"NOMAD: Neptune Orbiter Mission for Auroral Detection"* was accepted for presentation at the International Astronautical Congress (IAC) in Milan.

BAPC preliminaries — 2017
3rd place

My team and I came in 3rd in the Benelux Algorithm Programming Contest, qualifying us for the finals in Amsterdam.

Languages

Dutch	Native
English	C2
German	B2
French	A2
Swedish	A1
Chinese	A1

Projects

Apygee — 2024

A Python library for creating, manipulating and visualizing Kepler orbits, using popular scientific packages like `numpy`, `scipy` and `matplotlib`. Published on PyPi.

Wikigraph — 2022

A React app for visualizing graph connections between Wikipedia pages. I hand-rolled my own WikiMedia API interface in TypeScript and displayed the graphs using `react-three-fiber`.