

Eirik Rolland Enger

PhD candidate

PhD candidate at the complex systems modelling group at the Department of Physics and Technology, University of Tromsø.
Fond of abstract ideas, free open-source software and skiing.

Education

- 2020–2024 (expected)** *PhD, Climate Physics at the University of Tromsø (Tromsø, Norway)*
Thesis title: Deep Learning Approaches to the Self-Awesomeness Estimation Problem
- 2015–2020** *MS in Space Physics at the University of Tromsø (Tromsø, Norway)*
Thesis title: A model for IS spectra for magnetized plasma with arbitrary isotropic velocity distributions. Link: <https://hdl.handle.net/10037/19542>

Experience

- 2018–Now** *Teaching Assistant at University of Tromsø (Tromsø, Norway).*
- FYS-2000 Quantum Mechanics (S18)
 - FYS-0100 Basic Physics (F18,F19)
 - FYS-2009 Sun, planets and space (F20,F21)
 - FYS-3002 Techniques for investigating the near-earth space environment (S21)
- 2019 (2 months)** *Summer student at FFI — Norwegian Defence Research Establishment (Kjeller, Norway).*
- During eight weeks in the summer of 2019 I worked at the FFI, continuing the project on software defined radios from 2018. The goal this summer was to be able to do real time spoofing of a GNSS (Global Navigation Satellite System) receiver, meaning it should be possible for the spoofer to make adjustments to the path the fake signal gives, in real time. Multiple open-source projects was used, some of which I modified or wrote myself during the project. The added code was written in Python, and the complete project can be found in my [bladeGPS-Game repository](#). The project ended in a successful demonstration of real-time controlling of a spoofing signal.
- 2018 (3 months)** *Summer student at FFI — Norwegian Defence Research Establishment (Kjeller, Norway).*
- During nine weeks in the summer of 2018 I worked at the FFI on a project about software defined radios for use with jamming and spoofing of GNSS receivers. Open-source projects was used along with a number of different hardware, most

notably the **USRP**. At the end of the period, spoofing of both GNSS receivers and a phone was demonstrated, and a report documenting the project was written.

Technical Experience

Website	I have a website called flottflyt.com where I put up projects I work in my spare time, as well as any other content I find interesting. For example I have my own NFT storefront on the website that uses the metaplex protocol on the Solana blockchain.
Open Source	I maintain the project ncdump-rich which is published on PyPI . This is a pre-viewer for quickly showing formatted metadata in <code>.nc</code> files, written in python. I also contributed to stpv which is a general previewing tool to be used within the terminal.
Programming Languages	python: Have been programming in python for four years with increasing intensity, creating multiple projects over the years. See my github for a closer look at the different repositories.

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