Dion Häfner

Malmo Metropolitan Area

✉ mail@dionhaefner.de

in linkedin.com/in/dionhaefner

Summary

I am a PhD student in physical oceanography at Copenhagen University, with industry experience in data analysis and machine learning.

My main research interest is "human learning": How can we build algorithms that teach us something fundamental about our physical world?

Experience

PhD Student

Niels Bohr Institute, University of Copenhagen

Dec 2018 - Present (2 years 2 months +)

In my project, I use statistics / machine learning on large amounts of real-world data to quantify how and under which conditions extreme ocean waves (rogue waves) are generated.

Software Development Specialist

Sep 2017 - Dec 2018 (1 year 4 months)

At DHI GRAS, I built robust data pipelines, powerful statistical tools, and optimized remote sensing workflows.

Scientific Assistant

Niels Bohr Institute, University of Copenhagen

Jan 2017 - Aug 2017 (8 months)

I developed a full-blown, high-performance ocean model in pure Python. I was responsible for everything from the implementation of the numerics and the simulation framework, to quality assurance and documentation. If you want to learn more, check out Veros on GitHub:

https://github.com/dionhaefner/veros

Research Assistant (Programmer)

Institute of Environmental Physics

Mar 2015 - Dec 2016 (1 year 10 months)

Working in a small team of developers on a numerical software suite. Using C++, Python, Git; responsibilities include specification, implementation, testing, and deployment.

Education

Heidelberg University

Master of Science (MSc), Physics

2015 - 2017

With specialization in Computational Physics.

Københavns Universitet - University of Copenhagen

Physical Oceanography

2015 - 2016

External Master's Thesis in Physical Oceanography. Running climate models on the DC3 cluster, data evaluation, theoretical examination of large-scale ocean currents, implementation of a reduced-gravity model.

KTH Royal Institute of Technology

School of Engineering

2013 - 2014

Exchange semester during my Bachelor's.

Heidelberg University

Bachelor of Science - BS, Physics

2011 - 2015

Bachelor's thesis at Terrestrial Physics group, IUP Heidelberg: Implementing adaptive grid refinement into DORiE, a numerical PDE solver based on the DUNE framework.

Skills

Data Analysis • Mathematical Modeling • Python • Machine Learning • Software Development • Statistics • Simulations • Artificial Intelligence (AI) • Physics • Data Mining