

# DANIEL HOLMBERG

## Data Science Student

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## EXPERIENCE

### Research Assistant

#### Helsinki Institute of Physics

📅 Nov 2020 – present    📍 Kumpula Campus

- I research how jet energy corrections can be performed using deep neural network regression under the guidance of Dr. Henning Kirschenmann and Associate Prof. Mikko Voutilainen.

### Software Developer

#### Fjuul Vision Oy

📅 March 2020 – March 2021    📍 Sofia Future Farm

- I worked as a full-stack developer on the Fjuul health app. I became proficient at developing on Google Cloud Platform, and used a range of services such as Google BigQuery, PostgreSQL and Cloud Functions.
- My biggest task was integrating the Withings (former Nokia health) tracker into the Fjuul platform, which involved implementing the oauth handshake, API subscriptions, data retrieval, setting up data tables using Terraform (infrastructure as code), as well as updating the app frontend.

### Helper

#### CodeRefinery

📅 May 2020 – June 2020    📍 Online

- Advancing research software development FAIRness (findability, accessibility, interoperability, and reusability) through CodeRefinery, a project within the Nordic e-Infrastructure Collaboration
- Participant of the June 2020 CodeRefinery instructor training in collaboration with Delft University of Technology
- Helper at the first online mega-CodeRefinery workshop, [coderefinery.github.io/2020-05-25-online/#helpers](https://coderefinery.github.io/2020-05-25-online/#helpers)

### Writer

#### Towards Data Science

📅 October 2019 – June 2020    📍 Online

- I occasionally write blog posts on data sciency topics on TDS, a Medium publication.

### Research Assistant

#### University of Helsinki

📅 May – June 2018, May – August 2019    📍 Helsinki Accelerator Laboratory

- I assisted Dr. Antti Kuronen and Dr. Pekko Kuopanportti on the project “Atomistic modeling of kinetics on surfaces and interfaces of iron-chromium alloys” (AMKSIA) where I tested new interatomic potentials for the alloys using molecular dynamics simulations.

## EDUCATION

### M.Sc. Data Science

#### University of Helsinki

📅 2019 – present

### B.Sc. Physics

#### University of Helsinki

📅 2016 – 2019

- Thesis title: Interatomic Potentials for Simulating Fe-Cr
- GPA: 4.3/5

### Matriculation Examination

#### Ekenäs Gymnasium

📅 2013 – 2016

- Laudatur, top 5%: Chemistry, English, History

## ORGANIZATIONS

### Chief Editor

#### Spektrum rf

📅 2021

- I lead our student paper's team of editors
- I act as Wordpress admin for the website [spektrum.fi/spektraklet](https://spektrum.fi/spektraklet)
- I keep members up to date on social media

### Sports Official

#### Spektrum rf

📅 2019

- I organized bi-weekly student sports events

### Vice-Chairman

#### Nyland Brigade Conscript Committee

📅 2018

- I answered conscripts' questions related to studying
- I arranged working life events and a study fair with ~20 universities and polytechnics
- I visited multiple other finnish brigades together with our chairman to keep joint Conscript Committee meetings

## EXPERIENCE

### Teaching Assistant

#### University of Helsinki

📅 March – May 2018, 2019, 2020

📍 Kumpula Campus

- I helped students with their homework in the bachelor's course on special theory of relativity.

### Tutor

#### Uplus Yksityisopetus Oy

📅 January 2017 – May 2018

📍 Helsinki

- I worked as a private teacher in mathematics, physics and chemistry in the Helsinki region.

### Summer Staff

#### Premarin Oy

📅 2012 – 2017

📍 Raasepori

- I did outdoor work consisting mostly of driving around doing all sorts of facility management, sometimes also at Forcit Oy, and caring for boats.

## GROUP PROJECTS

### Atmospheric Aerosol Modeling

#### Data science with INAR

- A couple of fellow data science students and me predicted aerosol concentrations with the University of Helsinki Institute for Atmospheric and Earth System Research (INAR) using different machine learning algorithms.

🔗 [github.com/deinal/aerosol-modeling](https://github.com/deinal/aerosol-modeling)

</> Jupyter, Python, R

### Infinite AI

#### Demola Global student project

- I participated in a Demola Global challenge where we addressed the AI control problem with a team of international students.

🔗 [aisafety.netlify.app](https://aisafety.netlify.app)

</> HTML, CSS

### Kodanka

#### Teach programming in Swedish

- We started a project to teach programming in Swedish with a group of friends (work in progress).

🔗 [kodanka.fi](https://kodanka.fi)

</> Jupyter, reStructuredText, Python

## STIPENDS

- HU Study Grant, J. Pippingsköld and F. J. Wiik fund, 2020
- HU Study Grant, W. Brenner and R. Donner fund, 2019
- Scholarship from the Swedish Cultural Foundation, 2019
- Scholarship from Sophie von Julin's foundation, 2019
- HU Study Grant "to undergraduate students of mathematics and natural sciences whose academic performance has been excellent", 2018

## LANGUAGES

### Swedish

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### English

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### Finnish

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### German

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## SKILLS

Python

R

Git

Jupyter

JavaScript

Docker

Bash

TensorFlow

Fortran

Data Analysis

Computational Physics

Machine Learning

Teaching

Teamwork

## SIDE PROJECTS

### Spektrum App

#### Student association Android application

- I created an app for my student association to fetch the university lunch menu and as a handy way to reach our songbook.

🔗 [play.google.com/store/apps/details?id=fi.spektrum.app](https://play.google.com/store/apps/details?id=fi.spektrum.app)

</> React Native, Google Firebase

### Lyrics Generator

#### Data science intro project

- The web app can generate random lyrics based on Spotify global top 200 songs.
- It uses a recurrent neural network Python library working on top of TensorFlow.

🔗 [lyrics-gen.herokuapp.com](https://lyrics-gen.herokuapp.com)

</> Python, HTML, CSS

### Discord Bot

#### Adding functionality to a chat forum

- I created a bot running in the cloud to add some fun features to a Discord server.

🔗 [spektrumrf.github.io/bot](https://spektrumrf.github.io/bot)

</> Python

## HOBBIES

- I played forward in Spektrum FC, Unisport Futsal Series 2019-2020
- I ran as anchor in the Jukola Orienteering Relay 2019
- I ran Helsinki Half Marathon 2019
- I ran the Baltic Sea Half Marathon 2019