

# DANIEL HOLMBERG

## Data Science Student

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## EXPERIENCE

### Helper

#### CodeRefinery

May 2020 – present    Online

- Advancing research software development FAIRness (findability, accessibility, interoperability, and reusability) through CodeRefinery, a project within the Nordic e-Infrastructure Collaboration (NeIC)
- 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)

### Developer

#### Fjuul Visions Oy

March 2020 – present    Sofia Future Farm

- Part-time programmer for a fitness-tech company
- Learning software development best-practices
- Working in the cloud with Node.js and Google Cloud Platform

### Technical Writer

#### Towards Data Science

October 2019 – present    Freelance

- Occasionally writing blog posts on data science topics

### Research Assistant

#### University of Helsinki

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

- 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

### Teaching Assistant

#### University of Helsinki

March – May 2018, 2019, 2020    University of Helsinki

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

## 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

### Matriculation Examination

#### Ekenäs Gymnasium

2013 – 2016

## ORGANIZATIONS

### Writer, Social Media Manager

#### Spektrum rf

2019 – 2020

- Writer for our student paper
- Keeping members up to date on social media

### Sports Official

#### Spektrum rf

2019

- Organized bi-weekly student sports events

### Vice-Chairman

#### Nyland Brigade Conscript Committee

2018

- Responsible for questions related to studying, arranged working life events and a study fair with universities and polytechnics

## SKILLS

Python   R   Git   Jupyter   JavaScript  
Docker   Bash   MATLAB   Fortran

Data Analysis   Technical Writing

## EXPERIENCE

### Tutor

#### Uplus Yksityisopetus Oy

📅 January 2017 – May 2018

📍 Helsinki

- Private teaching in mathematics, physics and chemistry in the Helsinki region

### Substitute Teacher

#### Ekenäs Gymnasium

📅 October 2016

📍 Raasepori

- Taught mathematics and physics to high schoolers

### Summer Staff

#### Premarin Oy

📅 2012 – 2017

📍 Raasepori

- Outdoor work consisting mostly of facility management and caring for boats

## 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

### Infinite AI

#### Demola Global student project

- We as a team of students from China and Finland addressed the AI control problem in co-operation with Demola Global. Our findings are published on the webpage below.

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

</> HTML, CSS

### Kodanka

#### Teach programming in Swedish

- Started a project to teach programming in Swedish with a group of friends (a work in progress)
- Open source and licensed under Creative Commons Attribution-NonCommercial-ShareAlike

🔗 [kodanka.fi](https://kodanka.fi)

</> Jupyter, reStructuredText, Python

## LANGUAGES

Swedish

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English

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Finnish

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German

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## CODE

### Discord Bot

#### Adding features to an online forum

- Automating and adding features to a Discord server using a bot running in the cloud

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

</> Python

### Lyrics Generator

#### Data science intro project

- Generates random lyrics based on Spotify global top 200 songs
- Uses a recurrent neural network Python module working on top of Keras/TensorFlow

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

</> Python, HTML, CSS

### Mobile Apps

#### Android applications for my student association

- I created an app for my student association to fetch the university lunch menu and as a handy way to reach our songbook on occasion
- In addition to that I made a soundboard with no practical purpose whatsoever

🔗 [play.google.com/store/apps/developer?id=deinal](https://play.google.com/store/apps/developer?id=deinal)

</> React Native, Google Firebase, Java

### Integer Recognition

#### Scientific computing coursework

- Implemented singular value decomposition for recognizing images of integers

🔗 [github.com/deinal/svd-pattern-recognition](https://github.com/deinal/svd-pattern-recognition)

</> MATLAB