

Nathan Hugh Barr

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### **Address**

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# **Nathan Hugh Barr**

**Profile** I am well versed in data analysis and mathematical modelling. I can work with databases and visualise data. I have modelled physics phenomena and biological systems. I have knowledge in fitting routines and models which i can implement using Matlab and Python. I can with ease, begin and join projects due to my project heavy education at Roskilde University.

## **Education**

## 2016 - 2019, Roskilde University

Master of Science in Physics and Mathematics

Master Thesis:

- Title: Optimising the thickness determination of homopolymers and diblock copolymers using optical spectral reflectance during solvent vapour annealing.
- Collecting, analysing and visualising data.
- Programming models and fitting routines.
- Grade: 10

### 2013 - 2016, Roskilde Universitet

Bachelor of Natural Science in Physics and Mathematics

Bachelor project:

- Title: Mathematical competencies gained in Danish High School Education from 1958 to the present using integrals as a case study.
- Grade: 10

### **Relevant Courses**

- Calculus
- · Mathematical Modelling
- · Probability and Statistics
- Statistical Mechanics

## **Experience and Volunteering**

September 2016 and September 2017, *Teachers Assistant*, Data processing and Statistics.

- Teaching basic programming, scripting and functions.
- Teaching Introduction statistics in natural science.

January 2015 - December 2018, Private tutor, My academy.

October 2015 - December 2018, *Science Show Representative*, Roskilde University.

June 2017 - June 2019, Co-creator at Roskilde Festival, Volunteering.

## Technical skills

## Programming and systems

GNU OctaveMatLabPython

#### **Computer Software**

Linux
LateX
Microsoft Office

## Language

#### Danish

- Professional(Reading, Speaking) - Intermediate(Writing)

#### **English**

- Mothertounge



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## **Interests**

### **Professional**

Mathematical Modeling, Computional Physics and programming, Machine Learning, Experimental Physics: Small angle x-ray scattering, Grazing incidence small angle scattering, Dynamic light scattering, Reflectometry

## **Personal**

I am a 29 year old Australian who is both an Australian and Danish citizen and I have lived in Danmark for 10 years. My hobbies are running, bikepacking and playing bass guitar. A big part of my summer is volunteering at Roskilde festival building the Pavilion stage and the Pavilion area. When winter rolls around i enjoy skiing.