

Nathan Hugh Barr

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### **Address**

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# Nathan Hugh Barr

### **Professional Profile**

- Database Knowledge
- Mathematical Modelling
  - Differential equations
  - Partial differential equations
- Programming Skills Python
- Statistical Analysis

- Data Visualisation
- Problem based research
- Team Player
- Organisation and planning skills
- Problem Solver
- · Great communication skills

### **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



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## Language

### **Danish**

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

### **English**

- Mothertounge

### **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.