



Nathan Hugh Barr

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#### Address

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# Nathan Hugh Barr

## Fra data til indsigt.

### Professional Profile

- Database Knowledge - SQL
- Mathematical Modelling
  - Differential equations
  - Partial differential equations
  - Dynamical Systems
- Programming Skills - Python
- Statistical Analysis
- Data Visualisation
- Self-driven
- 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-RUC, 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 Octave
- MatLab
- Python

#### Computer Software

- Linux
- LaTeX
- Microsoft Office



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## Language

### Danish

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

### English

- Mother tongue

## Interests

### Professional

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

### Personal

I am 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.