

# Andreas M. Munk

## Curriculum Vitae

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## Education

- 2018–2022 **University of British Columbia (UBC)**, *Stud. PhD, Computer Science*.  
Focus areas: Probabilistic Programming, Machine Learning and AI
- 2016–2018 **Technical University of Denmark (DTU)**, *MSc., Mathematical Modelling and Computation*.  
Focus areas: Machine learning and signal processing.  
GPA: 11.8/12.
- 2015 **California Institute of Technology (Caltech)**, *International Exchange Student, USA*, duration; one term.  
GPA: 3.6/4.0.
- 2013–2016 **Technical University of Denmark**, *BSc. Earth and Space Physics and Engineering*.  
GPA: 10.9/12.

## Project contributor & Other links

Pyprob contributor: [github.com/probprog/pyprob](https://github.com/probprog/pyprob), *PyTorch-based library for probabilistic programming*.  
Github: [github.com/ammunk](https://github.com/ammunk).

## Skills

### Programming

Python • Clojure • Julia • Matlab • R • C/C++ • Mathematica •  $\text{\LaTeX}$ .

### Machine Learning and Scientific Computing Libraries

PyTorch • TensorFlow • Scikit-Learn • Numpy • SciPy.

### Data visualization tools

D3.

### Familiar with

HTML • JavaScript.

## Publications

- [1] Atılım Gunes Baydin, Lukas Heinrich, Wahid Bhimji, Bradley Gram-Hansen, Gilles Louppe, Lei Shao, Kyle Cranmer, Frank Wood, et al. "Efficient Probabilistic Inference in the Quest for Physics Beyond the Standard Model". In: *arXiv preprint arXiv:1807.07706* (2018).
- [2] Atılım Güneş Baydin, Lei Shao, Wahid Bhimji, Lukas Heinrich, Lawrence Meadows, Jialin Liu, Andreas Munk, Saeid Naderiparizi, Bradley Gram-Hansen, Gilles Louppe, et al. "Etalumis: Bringing Probabilistic Programming to Scientific Simulators at Scale". In: *arXiv preprint arXiv:1907.03382* (2019).
- [3] A. M. Munk, K. V. Olesen, S. W. Gangstad, and L. K. Hansen. "Semi-Supervised Sleep-Stage Scoring Based on Single Channel EEG". In: *2018 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. Apr. 2018, pp. 2551–2555. DOI: 10.1109/ICASSP.2018.8461982.

## Academic Experience and Teachings

### Employment

- 2017 **Teaching assistant in "Introduction to Machine Learning and Data Mining", DTU.**
- 2016 **Teaching assistant in "Continuous and Discrete Time Signals", DTU.**
- 2014–2015 **Teaching assistant in "Advanced engineering mathematics 1", DTU.**

## Professional Employment

- 2017 **Intern at Canecto, Copenhagen, Denmark.**  
In charge of building the company's core machine learning models

## Scholarships and Awards

- 2018–2022 **Faculty of Science PhD Tuition Award.**  
Amount: 5460 CAD/yr
- 2018–2022 **International Tuition Award.**  
Amount: 3200 CAD/yr
- 2018 **IEEE Signal Processing Society (SPS) Travel Grant.**  
Amount: 3700 DKK
- 2018 **DTU Compute, Denmark.**  
Amount: 7600 DKK
- 2018 **Otto Moenstedts Fond, Denmark.**  
Amount: 6700 DKK
- 2016 **Garvermester C. W. Gerickes scholarship, Denmark.**  
Amount: 6000 DKK
- 2015 **DTU's travel scholarship, Denmark.**  
Amount: 6000 DKK
- 2015 **Frk. Marie Maanssons scholarship, Denmark.**  
Amount: 10000 DKK
- 2015 **Otto Moenstedts Fond, Denmark.**  
Amount: 10000 DKK

## Languages

### English.

Full professional proficiency

### German.

Limited working proficiency

### Danish.

Native or bilingual proficiency

## Other

- 2010–2012 **Masterclass Physics and Chemistry during high school.**  
The Masterclass program is for a few selected students who excel in science in high school  
**Contact:**  
Silkeborg High School
- 2012–2013 **Traveled around the world, duration: 6 months.**  
Some of the visited locations; Southeast Asia, New Zealand, Central America and South America