

# Andreas M. Munk

Vancouver BC, Canada

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🎓 Andreas M. Munk

## Education

### University of British Columbia

PHD. IN COMPUTER SCIENCE

- Specializing in probabilistic programming and machine learning

Vancouver, Canada

2018 - 2020 (expected)

### The Technical University of Denmark

MSC. IN MATHEMATICAL MODELLING AND COMPUTATION

- GPA: 11.8/12.0

Copenhagen, Denmark

2016 - 2018

### California Institute of Technology

EXCHANGE STUDENT

- GPA: 3.6/4.0

Los Angeles, USA

2015

### The Technical University of Denmark

BSC. IN EARTH AND SPACE PHYSICS AND ENGINEERING

- GPA: 10.8/12.0

Copenhagen, Denmark

2013 - 2016

## Skills

<b>Programming</b>	Python, Julia, Clojure, Matlab, C/C++, $\text{\LaTeX}$
<b>Machine Learning and Scientific Computing Libraries</b>	PyTorch, Tensorflow, Scikit-Learn, Numpy, Scipy
<b>Probabilistic Programming Languages</b>	PyProb (contributor - pending pull request), Anglican, Pyro
<b>DevOps</b>	Docker, Singularity
<b>Languages</b>	Danish (native), English (fluent), German

## Experience

### ACADEMIC EXPERIENCE AND TEACHINGS

#### The Technical University of Denmark

TEACHING ASSISTANT

- Course: Introduction to Machine Learning and Data Mining

Copenhagen, Denmark

2017

#### The Technical University of Denmark

TEACHING ASSISTANT

- Course: Continuous and Discrete Time Signals

Copenhagen, Denmark

2016

#### The Technical University of Denmark

TEACHING ASSISTANT

- Course: Advanced Engineering Mathematics 1

Copenhagen, Denmark

2014 - 2015

### INDUSTRIAL EXPERIENCE

#### Canecto

MACHINE LEARNING ENGINEER (INTERNSHIP)

- In charge of building the company's core machine learning models

Copenhagen, Denmark

2017

## Extracurricular Activity

### World Roundtrip

DENMARK→SOUTHEAST ASIA→NEW ZEALAND→CENTRAL AMERICA→SOUTH AMERICA→DENMARK

2012 - 2013 (6 months)

### Hobbies

TENNIS, TABLE TENNIS, PIANO, GAMES, WEIGHTLIFTING

## Honors & Awards

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2018 - 2022	<b>Faculty of Science PhD Tuition Award</b> , University of British Columbia	Canada
2018 - 2022	<b>International Tuition Award</b> , University of British Columbia	Canada
2020	<b>President's Academic Excellence Initiative PhD Award</b> , University of British Columbia	Canada
2018	<b>Research travel grant</b> , IEEE Signal Processing Society (SPS)	
2018	<b>Research travel grant</b> , DTU Compute	Denmark
2018	<b>Research travel grant</b> , Otto Mønstedts Fond	Denmark
2016	<b>Scholarship</b> , Garvermester C. W. Gerickes scholarship	Denmark
2016	<b>Scholarship</b> , Technical University of Denmark	Denmark
2016	<b>Scholarship</b> , Frk. Marie Månssons scholarship	Denmark
2016	<b>Scholarship</b> , Otto Mønstedts Fond	Denmark

## Publications

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- [1] Atilim Gunes Baydin, Lei Shao, Wahid Bhimji, Lukas Heinrich, Saeid Naderiparizi, Andreas Munk, Jialin Liu, Bradley Gram-Hansen, Gilles Louppe, Lawrence Meadows, et al. "Efficient probabilistic inference in the quest for physics beyond the standard model". In: *Advances in Neural Information Processing Systems*. 2019, pp. 5460–5473.
- [2] Atilim 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: *Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis*. ACM. 2019, p. 29.
- [3] William Harvey, Andreas Munk, Atilim Güneş Baydin, Alexander Bergholm, and Frank Wood. "Attention for Inference Compilation". In: *arXiv preprint arXiv:1910.11961* (2019).
- [4] Andreas Munk, Adam Ścibior, Atilim Güneş Baydin, Andrew Stewart, Goran Fernlund, Anoush Poursartip, and Frank Wood. "Deep Probabilistic Surrogate Networks for Universal Simulator Approximation". In: *arXiv preprint arXiv:1910.11950* (2019).
- [5] Saeid Naderiparizi, Adam Ścibior, Andreas Munk, Mehrdad Ghadiri, Atilim Güneş Baydin, Bradley Gram-Hansen, Christian Schroeder de Witt, Robert Zinkov, Philip HS Torr, Tom Rainforth, et al. "Amortized Rejection Sampling in Universal Probabilistic Programming". In: *arXiv preprint arXiv:1910.09056* (2019).
- [6] 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)*. 2018, pp. 2551–2555. doi: 10.1109/ICASSP.2018.8461982.