Andreas M. **Munk**

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🎓 Andreas M. Munk

Education

University of British Columbia *Vancouver, Canada*
PhD. in Computer Science *2018 - 2022 (expected)*
- Specializing in probabilistic programming and machine learning

The Technical University of Denmark *Copenhagen, Denmark*
MSc. in Mathematical Modelling and Computation *2016 - 2018*
- GPA: 11.8/12.0

California Institute of Technology *Los Angeles, USA*
Exchange Student *2015*
- GPA: 3.6/4.0

The Technical University of Denmark *Copenhagen, Denmark*
BSc. in Earth and Space Physics and Engineering *2013 - 2016*
- GPA: 10.9/12.0

Skills

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

Experience

Academic Experience and Teachings

The Technical University of Denmark *Copenhagen, Denmark*
Teaching Assistant *2017*
- Course: Introduction to Machine Learning and Data Mining

The Technical University of Denmark *Copenhagen, Denmark*
Teaching Assistant *2016*
- Course: Continuous and Discrete Time Signals

The Technical University of Denmark *Copenhagen, Denmark*
Teaching Assistant *2014 - 2015*
- Course: Advanced Engineering Mathematics 1

Industrial Experience

Canecto *Copenhagen, Denmark*
Machine Learning Engineer (internship) *2017*
- In charge of building the company's core machine learning models

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

2018 - 2022 **Faculty of Science PhD Tuition Award**, University of British Columbia *Canada*

2018 - 2022 **International Tuition Award**, University of British Columbia *Canada*

2020 **President's Academic Excellence Initiative PhD Award** , University of British Columbia *Canada*

2018 **Research travel grant**, IEEE Signal Processing Society (SPS)

2018 **Research travel grant**, DTU Compute *Denmark*

2018 **Research travel grant**, Otto Mønsteds Fond *Denmark*

2016 **Scholarship**, Garvermester C. W. Gerickes scholarship *Denmark*

2016 **Scholarship**, Technical University of Denmark *Denmark*

2016 **Scholarship**, Frk. Marie Månssons scholarship *Denmark*

2016 **Scholarship**, Otto Mønsteds Fond *Denmark*

Publications

[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, Atılım Güneş Baydin, Alexander Bergholm, and Frank Wood. "Attention for Inference Compilation". In: *arXiv preprint arXiv:1910.11961* (2019).

[4] Andreas Munk, Adam Ścibior, Atılım 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, Atılım 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.