Nicklas **Hansen**



Research Interest

I am broadly interested in developing intelligent systems that continuously learn, generalize, and adapt. My work is at the intersection of **machine learning**, **robotics**, and **computer vision**.

Education

University of California, Berkeley

Berkeley, CA, USA

Visiting Student, GPA: 4.0/4.0

Spring 2020

· Spar Nord Fonden scholarship recipient, Collider Cup finalist, Innovation Centre Denmark's SPARK winner.

Technical University of Denmark

Kongens Lyngby, Denmark

MSc Mathematical Modeling & Computation, GPA: 10.7/12.0

Feb 2019 - est. Feb 2021

· Special topics in machine learning and research projects. Advised by Ole Winther.

Technical University of Denmark

Kongens Lyngby, Denmark

BSc Software Technology, GPA: 8.2/12.0, final year GPA: 10.8/12.0

Sep 2015 - Dec 2018

• Nanyang Technological University, Singapore - semester abroad, Fall 2017.

Research Experience

University of California, San Diego

San Diego, CA, USA

Visiting Researcher

July 2020 - Aug 2021

· Reinforcement learning. Advised by Xiaolong Wang.

University of California, Berkeley - Berkeley Artificial Intelligence Research (BAIR)

Berkeley, CA, USA

Graduate Research Intern

Jan 2020 - July 2020

· Reinforcement learning. Supervised by Xiaolong Wang & Lerrel Pinto, advised by Alyosha Efros.

DTU Cognitive Systems

Kongens Lyngby, Denmark

Student Researcher

Fall 2019

· Transfer learning for deep sequence modeling in personalized healthcare. Advised by Morten Mørup.

Publications and Pre-prints

Generalization in Reinforcement Learning by Soft Data Augmentation

Pre-print

Submitted to IEEE International Conference on Robotics and Automation (ICRA)

2020

https://arxiv.org/abs/2011.13389

Nicklas Hansen, Xiaolong Wang

Self-Supervised Policy Adaptation during Deployment

Workshop

Submitted to International Conference on Learning Representations (ICLR), Scores: 7777

Deep Reinforcement Learning Workshop @ NeurlPS 2020

2020

Nicklas Hansen, Rishabh Jangir, Yu Sun, Guillem Alenyà, Pieter Abbeel, Alexei A. Efros,

Lerrel Pinto, Xiaolong Wang

https://arxiv.org/abs/2007.04309

https://openreview.net/forum?id=o_V-MjyyGV_

Short Term Blood Glucose Prediction Based on Continuous Glucose Monitoring Data

Poster

IEEE Engineering in Medicine and Biology Conference (EMBC)

Ali Mohebbi, Alexander R. Johansen, Nicklas Hansen, Peter E. Christensen, Jens M. Tarp,

Morten L. Jensen, Henrik Bengtsson, Morten Mørup

https://arxiv.org/abs/2002.02805

2020

Teaching

Technical University of Denmark

Co-organizer

Reinforcement Learning

Jan 2021

· Special course that I co-organized w/ Prof. Ole Winther for a group of students. Three weeks of full-time study.

Technical University of Denmark

Teaching Assistant

02456 Deep Learning

Fall 2019, Fall 2020

· Significant course material contributions, supervised 100+ students' projects on reinforcement learning.

02454 Introduction to Cognitive Science

Fall 2019

· Assisted tutorial sessions, corrected assignments.

Work Experience

raffle.ai Copenhagen, Denmark

Machine Learning Intern

Summer 2019

· I built a cross-domain text-to-SQL parser in PyTorch.

Retune DSP Kongens Lyngby, Denmark

Student Assistant

Feb 2019 - Dec 2019

· I helped a team of engineers build and maintain deep learning pipelines for embedded voice control.

Nordic Transition

Gentofte, Denmark

Student Software Developer

Jul 2016 - Dec 2019

· I developed and maintained a data management and analysis platform for the HR industry.

Academic Service

2021	Association for the Advancement of Artificial Intelligence (AAAI)	Reviewer
2020	Annual Conference of the Association for Computational Linguistics (ACL)	Assisted review
2020	SIGNLL Conference on Computational Natural Language Learning (CoNLL)	Assisted review

Awards

2020 Spar Nord Fond Scholarship

Scholarship

· A scholarship to study a semester at UC Berkeley (5 recipients nation-wide).

2020 Berkeley Collider Cup Finalist

Award

· Biannual startup competition. Best student project from each class is nominated.

2020 Innovation Center Denmark's SPARK Winner

Award

· Best project in a 6-month entrepreneurial program in the Bay Area.

2017 Otto Mønsted Fonds Legat

Scholarship

· A grant for high-achieving students (GPA > 8.0) that wish to study a semester abroad.

Selected Open-Source Projects

DMControl Generalization Benchmark

Nov 2020

 \cdot Benchmark for generalization in continuous control from pixels.

https://github.com/nicklashansen/dmcontrol-generalization-benchmark

Optimization in Deep Learning

Dec 2019

· Implementation and benchmark of recent deep learning optimization algorithms.

https://github.com/nicklashansen/neural-net-optimization

How to build RNNs and LSTMs from scratch with NumPy

Oct 2019

· Educational material on recurrent neural networks. https://github.com/nicklashansen/rnn_lstm_from_scratch

Programming Python, C, C#, JavaScript, Matlab, SQL **Machine Learning** PyTorch, TensorFlow

Others Linux, Docker, Git, Kubernetes, LSF/SLURM, Azure, AWS, Jupyter, MuJoCo, Latex