Thomas Kleine Buening

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Education

University of Oslo   *Oslo, Norway*
PhD in Computer Science   *Jan 2021 - current (expected Mar 2024)*
- Topics: Reinforcement Learning, Game Theory, Algorithmic Fairness
- Advised by Christos Dimitrakakis
- Funded by the Norwegian Research Council

University of British Columbia   *Vancouver, Canada*
Visiting Student in the Probability Group   *Jun 2019 - Dec 2020*
- GPA: 94/100
- Hosted by Edwin Perkins
- Funded by DAAD scholarship

University of Münster   *Münster, Germany*
Master of Science in Mathematics   *Oct 2018 - Sept 2020*
- Graduated with Distinction. Grade: 1.0 (equivalent GPA: 4.0/4.0)
- Specialised in Probability Theory, Stochastic Processes, and Statistics
- Thesis: Branching in Random Environment and Linear Fractional Distributions

University of Münster   *Münster, Germany*
Bachelor of Science in Mathematics   *Oct 2014 - Sept 2017*
- Grade: 1.9 (equivalent GPA: 3.1/4.0)
- Minor in Computer Science
- Thesis: Optimal Stopping in Finite Time

Selected Coursework (BSc, MSc, PhD):

linear algebra, complex analysis, functional analysis, probability theory I-III, mathematical statistics, stochastic analysis, computability theory

Teaching Experience

University of Oslo   *Oslo, Norway*
Teaching Assistant   *Aug 2022 - Jul 2023*
- TA for "Reinforcement Learning and Decision Making under Uncertainty" (undergrad/grad)

University of Münster   *Münster, Germany*
Teaching Assistant   *Oct 2018 - Sept 2020*
- TA for "Introduction to Stochastics" (undergrad)
- TA for "Probability Theory I" (undergrad)
- TA for "Mathematical Statistics" (undergrad)

Qingdao University of Science and Technology   *Qingdao, China*
Teaching Assistant at the German-Chinese Campus   *Mar 2018 - Jul 2018*
- Taught refresher course on "Ordinary Differential Equations" (undergrad)

Publications and Preprints

Conference Proceedings

Minimax-Bayes Reinforcement Learning
    Thomas Kleine Buening, Christos Dimitrakakis, Hannes Eriksson, Divya Grover, Emilio Jorge
    International Conference on Artificial Intelligence and Statistics, 2023, [pdf]

ANACONDA: An Improved Dynamic Regret Algorithm for Adaptive Non-Stationary Dueling Bandits
    Thomas Kleine Buening, Aadirupa Saha
    International Conference on Artificial Intelligence and Statistics, 2023, [pdf]

Interactive Inverse Reinforcement Learning for Cooperative Games
    Thomas Kleine Buening, Anne-Marie George, Christos Dimitrakakis
    International Conference on Machine Learning, 2022, [pdf]
    Best Paper Award at the Cooperative AI Workshop at NeurIPS 2021

On Meritocracy in Optimal Set Selection
    Thomas Kleine Buening, Meirav Segal, Debabrota Basu, Anne-Marie George, Christos Dimitrakakis
    Equity and Access in Algorithms, Mechanisms, and Optimization, 2022, [pdf]
    Best Student Paper Award

PREPRINTS / WORKSHOP PAPER

Bandits Meet Mechanism Design to Combat Clickbait in Online Recommendation
    Thomas Kleine Buening, Aadirupa Saha, Christos Dimitrakakis, Haifeng Xu
    Interactive Learning with Implicit Human Feedback Workshop at NeurIPS 2023, [pdf]

Environment Design for Inverse Reinforcement Learning
    Thomas Kleine Buening, Christos Dimitrakakis
    Human in the Loop Learning Workshop at NeurIPS 2022, [pdf]

Work Experience

Deloitte Consulting   *Hamburg, Germany*

Intern   *Mar 2018 - Jul 2018*
- ML and AI for business applications (forecasting, trend analysis, ...)

zeb consulting   *Münster, Germany*

Student Assistant in Software Engineering   *Jan 2016 - Sep 2017*
- Designed and implemented automated data quality tests

zeb consulting   *Frankfurt, Germany*

Intern in Finance   *Feb 2017 - Apr 2017*
- Credit risk model validation

Skills

Programming   Python (PyTorch, NumPy, Scikit-learn), SQL

Languages

German   Native
English   Fluent
Chinese   Conversational