# SAEED GHOORCHIAN

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#### **EDUCATION**

Ph.D. in Computer Science (Machine Learning), University of Tübingen, Germany.

2018 - Present

Thesis: Online Learning under Partial Feedback

Advisor: Prof. Setareh Maghsudi

M.Sc. in Applied Mathematics, Joint Erasmus Mundus Master Program,

University of Hamburg (primary), Germany, and University of L'Aquila (secondary), Italy.

2015 - 2017

Thesis: Kernelized Principal Component Analysis of a Linear Parameter Varying model of the Gyro-

scope

Adviser: Prof. Herbert Werner

B.Sc. in Pure Mathematics, Iran University of Science and Technology, Iran.

2009 - 2014

#### **PUBLICATIONS**

- [1] Saeed Ghoorchian and Setareh Maghsudi. "Multi-Armed Bandit for Energy-Efficient and Delay-Sensitive Edge Computing in Dynamic Networks with Uncertainty". *IEEE Transactions on Cognitive Communications and Networking (TCCN)*, 2020.
- [2] Onur Atan, Saeed Ghoorchian, Setareh Maghsudi, and Mihaela van der Schaar. "Data-Driven Online Recommender Systems with Costly Information Acquisition". *IEEE Transactions on Services Computing (TSC)*, 2021.
- [3] Saeed Ghoorchian\*, Behzad Nourani-Koliji\*, and Setareh Maghsudi. "Linear Combinatorial Semi-Bandit with Causally Related Rewards". *International Joint Conference on Artificial Intelligence (IJCAI)*, 2022.
- [4] Saeed Ghoorchian and Setareh Maghsudi. "Bayesian Linear Bandits for Large-Scale Recommender Systems". *Under review*, 2022.
- [5] **Saeed Ghoorchian**, Evgenii Kortukov, and Setareh Maghsudi. "Online Learning with Costly Features in Non-stationary Environments". *Under review*, 2022.
- **Q** guchis/NCC-Bandits
- [6] **Saeed Ghoorchian** and Setareh Maghsudi. "Non-stationary Delayed Combinatorial Semi-Bandit with Causally Related Rewards". *Under review*, 2022.

## WORK EXPERIENCES

Senior Researcher, University of Tübingen, Germany.

June 2022 - Present

Designing algorithms to address reinforcement learning problems with perturbed rewards and inverse reinforcement learning problems in multi-agent systems.

Consultant on Algorithm Development, Datalyze Solutions GmbH, Germany.

May 2022 - July 2022 · Freelance

Algorithm design and development of optimization problems for real-time task planning in changing environments.

Research Assistant, Technical University of Berlin, Germany.

May 2018 - May 2022

Developing frameworks and algorithms to model and solve online learning problems with partial feedback in dynamic environments with various characteristics, such as causal relations, costly features, and high-dimensional features.

Guest Researcher, Hamburg University of Technology, Germany.

November 2017 - March 2018

Applying kernelized principal component analysis, support vector machines, and  $\epsilon$ -support vector regression for modeling systems of high complexity.

• guchis/An-epsilon-SVR-Approach-for-Model-Identification

• guchis/Dimensionality-Reduction-Using-KPCA

## ACADEMIC EXPERIENCES AND APPEARANCES

Teaching Assistant, University of Tübingen, Germany.

October 2022 - Present October 2021 - March 2022

Course: Introduction to Game Theory with Application in Multi-Agent Systems.

Supervision, Technical University of Berlin and University of Tübingen, Germany.

May 2021 - May 2022

Supervising bachelor and master students to design learning algorithms.

Reviewer: IEEE ISIT 2022 – AISTATS 2021 – IEEE TCNC.

#### Talks and Presentations:

September 2022 University of Tübingen

July 2022 IJCAI 2022

November 2021University of TübingenJune 2021University of TübingenApril 2021University of Tübingen

September 2017 Hamburg University of Technology

## **SKILLS**

- Python (Proficient), Matlab (Good), C++ (Basic), R (Basic).
- Pytorch, Keras, Tensorflow, Pandas, Numpy, Matplotlib.
- MS Azure, Simulink.
- English (Fluent), Persian (Native), German (Basic), Italian (Basic).

## AWARDS AND HONORS

**September 2015** Admission as one of the top students for master studies.

 ${\bf August~2015} \qquad \quad {\rm Full~scholarship~from~the~Erasmus~Mundus~program~(from~EU)}.$ 

**September 2009** Admission as one of the top students for bachelor studies.