



Alp Karaagac

+49 176 81 344 383 alp.karaagac@tum.de Schleißheimer Str. 169, München, 80797

Profile

As a driven informatics student at TUM, I possess a solid understanding of software engineering. I am highly motivated to utilize my technical skills and problem-solving mindset on a given problem while also cultivating new skills and learning from my environment.

Experience

TUTOR - WINTER SEMESTER 23/24

I have worked as a tutor for the course: Grundlagen Datenbanken and Diskrete Strukturen. I had my own class where I was working with the students about the last weeks homework and repeat the material in the course.

SEMINAR: SECURITY AND PRIVACY ECONOMICS – WINTER SEMESTER 23/24

Me and a friend have used machine learning for determining malicious accounts just by the digital fingerprints received through our application and analyses whether it was possible to find a better balance between the security of the user and the privacy of the user.

PRAKTIKUM: HANDS ON DEEP REINFORCEMENT LEARNING – SUMMER SEMESTER 24

Successfully completed a "Hands-on Deep Reinforcement Learning" Praktikum, focusing on optimizing smart heat pump control over longer time horizons. Key contributions include implementing PCA-based dimensionality reduction for forecast inputs, developing time and date wrappers to enhance decision-making, and modeling thermodynamic energy to improve system efficiency.

AN EMPIRICAL COMPARISON OF LEARNING-TO-OPTIMIZE ALGORITHMS WITH END-TO-END APPROACHES, BACHELORS THESIS

Proposed and implemented a novel approach using RNN-based architectures to handle varying amounts of constraints in optimization problems. The research evaluated neural models trained with supervised and self-supervised learning, showing that self-supervised methods can achieve comparable results without labeled data, offering a more efficient solution.

Education

Deutsche Schule Istanbul (Abitur) – High School, 2021

Technische Universität München, Bachelor of Science, Informatics - University, October 2024

Technische Universität München, Master of Science, Informatics - University, Ongoing

Skills

Comprehensive in Java, Python

Regression and Data Analysis

Object Oriented Programming

PyTorch and Stable Baselines