Michael Chatiskatzi

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Education

Karlsruhe Institute of Technology — Karlsruhe, Germany
Master of Science in Computer Science — *Oct. 2019 – April 2024*
- Thesis: *Transformer-Based Model for Non-Invasive Blood Pressure Estimation from Videos*

Karlsruhe Institute of Technology — Karlsruhe, Germany
Bachelor of Science in Computer Science — *Oct. 2014 – April 2019*
- Thesis: *Koevolution von Metamodellvarianten und deren Instanzen* (Co-evolution of Metamodel Variants and Their Instances)

Experience

Student Research Assistant — May 2024 – Oct. 2024
FZI Research Center for Information Technology — *Karlsruhe, Germany*
- Continuing my master's thesis research on the development of Transformer-based models for continuous and non-invasive blood pressure monitoring
- Implementing and optimizing Transformer-based algorithms for accurate blood pressure monitoring
- Conducting experiments and analyzing data to validate the effectiveness of the proposed methods

Student Teaching Assistant — July 2022 – Mar. 2023
Karlsruhe Institute of Technology — *Karlsruhe, Germany*
- Co-supervised the lectures *Cognitive Systems* and *Introduction to Artificial Intelligence*
- Reviewed exercise sheets, Jupyter notebook codes and exams

Java Software Developer — Dec. 2017 – Aug. 2021
Vector Informatik — *Karlsruhe, Germany*
- Developed a system for recording and storing metamodel deltas and replaying them on another metamodel variant
- Further development of an internal system for rapid test feedback after code changes

Projects

Tissue Classifier | *Python, pandas, NumPy, ROS/ROS2* — Oct. 2022 – Mar. 2023
- Developed machine learning algorithms for the prediction of material/tissue types
- Implemented ROS2 nodes for data processing and storage
- Performed online tests on various objects/tissues

KaraokAI | *Python, PyTorch, Jupyter Dash* — Jan. 2023 – Feb. 2023
- Developed a comprehensive audio processing solution, including audio extraction, forced alignment, genre classification and website creation
- Implemented forced alignment with a pre-trained model
- Trained of the genre classification model on song lyrics

Using Metaworld in Imitation Learning — May 2022 – Sep. 2022
- Reconstructed of several tasks from Metaworld into the internal simulation framework of the institute and further development of tele-operation
- Implemented supervised learning algorithms to learn a model from demonstrations

Robot Health Monitoring — Nov. 2016 – Mar. 2017
- Developed a system for online sensor anomaly detection for humanoid robots and detection of incorrectly provided sensor values
- Utilized of machine learning algorithms for anomaly detection

Technical Skills

Languages: Python, Java, C, C++, SQL (Postgres), MATLAB, JavaScript
Developer Tools: PyCharm, Git, VS Code, Eclipse, Visual Studio
Libraries: PyTorch, pandas, NumPy, Matplotlib, ROS/ROS2, TensorFlow