MILOŠ ŠOLAJA

M.SC. ROBOTICS, COGNITION, INTELLIGENCE

CONTACT

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SUMMARY

Recent graduate with a Master's in Robotics, Cognition and Intelligence, complemented by a Bachelor's in Mechanical Engineering demonstrating a keen interest in AI and ML. Working experience in both industry and academia, showcasing a passion for creative problem-solving and strong teamwork abilities. Openness to taking on both technical and project management responsibilities within projects.

SKILLS

TECHNICAL SKILLS

- OS: Microsoft Windows, Mac OS, Ubuntu Linux
- MATLAB/Simulink
- Machine Learning/Deep Learning: PyTorch, Numpy, Matplotlib
- Mobile: Android Kotlin/Java, React Native
- Automotive: Android Auto and Automotive OS
- Web: React with JavaScript
- Prototyping: Protopie
- Autodesk Inventor, CATIA
- MySQL, Mongo
- Git, Docker
- Arduino
- Microsoft Office

WORKING EXPERIENCE

STUDENT RESEARCH ASSISTANT AND MASTER THESIS

Fraunhofer IGCV | August 2023 - January 2024

- Developed custom software used for coordination between cognitive assistance systems (CAS) within manual assembly

Python | PyQt5 | PyTorch | Rasa

WORKING STUDENT - TECHNOLOGY SCOUTING AND RESEARCH IN FIELD OF NEW SOFTWARE TECHNOLOGIES

BMW AG | February 2021 - September 2022

- Research, analysis and comparison of new technologies that are relevant for BMW ecosystem and prototype development
- Developed prototypes:
  - SSI login integration into existing infrastructure
  - Dynamic Ambient Light for InCar Gaming

Android | React | Python | Hyperledger | Powerpoint

EDUCATION

M.SC. ROBOTICS, COGNITION, INTELLIGENCE

Technical University of Munich | 2021-2023

Covered courses:

- Machine and Deep Learning
- Computer Vision
- AI Foundations
- Robotics and Motion Planning in Robotics
- Advanced Seminar in Digital Transformation (Sponsored by SAP and Cooperation with Capgemini Germany)
- Autonomous Driving and Software Development for Autonomous Driving
- Principles of Economics

Master thesis in cooperation with Fraunhofer IGCV

Topic of the thesis: Development of a Chatbot for the Detection of Human Support Level for Cognitive Assistance Systems in Manual Assembly (Grade: 1,0)

- Developed a dialog system that leverages voice and text inputs to improve the handling and configuration of CAS
- Performed research and comparison of NLP and dialog systems approaches and selection of optimal ones for this use case
- Compared different sentiment analysis approaches and fine-tuned BERT model
- Implemented dialog system into existing infrastructure

B.SC. MECHANICAL ENGINEERING

Technical University of Munich | 2017-2021

Covered courses:

- Mathematics and Mathematical Tools
- Modeling of Uncertainty and Data
- Basics of Modern Information Technology
- Automatic Control
- Engineering Mechanics
- Industrial Software Engineering
- Investment and Financial Management

Bachelor thesis in cooperation with Filics GmbH

Topic of the thesis: Design, Specification, and Implementation of Different Operating Modes for an Autonomous Guided Vehicle for Intralogistics (Grade: 1,0)

- Defined and implemented measures that ensure safety and stability of an autonomous guided vehicle in different situations
- Measures involved different modes for safety sensors, triggers for their activation and safety constraints for control system of the vehicle

PROJECTS

PROJECT “THE INTELLIGENT ANAMNESIS” - DATA SCIENTIST

TUM.AI Industry Phase 5 | September 2023 - December 2023

- Project goal was to train model that determines patient’s diagnosis based on answers from a predefined questionnaire
- Developed pipeline based on various NLP techniques (pattern matching, word embeddings, LLMs) used for dataset creation essential for model training

Python | PyTorch | LLMs | Docker

PROJECT LEAD FOR PROJECT “HYPERAUTOMATION FOR MARKETING” AT CHAIR OF ROBOTICS, ARTIFICIAL INTELLIGENCE AND REAL-TIME SYSTEMS

Technical University of Munich | October 2022 - March 2023

- Led a team that developed prototype used to hyper automate the creation and posting process of social media content with self improvement mechanism
- Prototype takes text input and generates visually and content wise appealing posts for social media including image, short text and hashtags

Python | PyTorch | Mongo | ML/DL Models

PUBLICATIONS

Klaus Fink, Miloš Šolaja, Rüdiger Daub. Empowering Manual Assembly: Dialog System for Enhanced Customization and Efficiency of Cognitive Assistance Systems, 18th CIRP Conference on Intelligent Computation in Manufacturing Engineering, 10-12 July, Naples, Italy.

LANGUAGES

- German
- English
- Italian
- Serbian

OTHER ACTIVITIES

- Model United Nations (MUNTUM) Delegate
- CDTM InnoLabs participant