ARTIFICIAL INTELLIGENCE (A-I)

A-I 574: Natural Language Processing

3 Credits

Natural Language Processing (NLP) is a subfield of Artificial Intelligence. This course covers basic as well as advanced concepts to gain a detailed understanding of NLP tasks such as language modeling, text to speech generation, natural language understanding, and natural language generation. Students will learn the necessary skills to design a range of applications, including sentiment analysis, translating between languages, and answering questions. Throughout the course, the practical implementation of these applications with deep neural networks is also discussed.

A-I 801: Foundation of Artificial Intelligence

3 Credits

Artificial Intelligence (AI) is the discipline that attempts to build and understand intelligent entities. Computers with human level intelligence would have a huge impact as intelligent systems with natural language processing, robotics, building networked assistants, speech recognition, and autonomous driving. This course will teach the foundations of AI and give students a practical understanding of the field. This course gives an overview of the core concepts of AI, including the intelligent agents, knowledge and reasoning, reinforcement learning, planning and acting, belief networks, computational learning, Markov decision process, and more!

A-I 879: Machine Vision

3 Credits

This course will focus on the design of computer-based, machine vision systems using appropriate algorithms and best practices. Students will study various techniques for image representation and structuring, feature extraction and segmentation, information extraction, filtering and analysis.

A-I 894: Capstone Experience

3 Credits

The capstone course in the MPS in Artificial Intelligence program. A practical experience in which students, working in teams, employ contemporary methods, process, and tools in the design and implementation of an AI-enabled system including problem identification, methodology selection, data identification and gathering, implementation, training, and deployment. As the culminating experience in the AI program, students demonstrate their ability to design and implement a full AI-enabled systems using a real-world dataset applying the tools and techniques explored throughout their preceding studies.