

## Group 2

|    | Name of student:                        | Preliminary project title                                                                                                 |
|----|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 1  | Jingyi Zhang                            | A Machine Learning-Powered Pipeline for Integrative Genomic Analysis and Risk Stratification in DLBCL                     |
| 2  | Eva-Marie Siegmund                      | Diffusion Network for Anomaly Detection in Medical Images                                                                 |
| 3  | Hávar Sigurðarson                       | Enhancing National Cyber Threat Intelligence for Sweden Using AI-Based Technologies                                       |
| 4  | Yamini Balanngari                       | Vulnerability Research of Mobile Applications Commonly Used in Sweden                                                     |
| 5  | Dong Hoon Kwak                          | Testbed for resilient scheduling of warehouses under conditions of disruption                                             |
| 6  | Jin Yang                                | Are Adversarial Attacks an Overlooked Threat to Robotic Manipulation? A Case Study on Pick-and-Place                      |
| 7  | Jinyu Han                               | Adaptive online feedback optimization for power systems                                                                   |
| 8  | Arka Pal                                | A Toolchain for Evaluating Physical Adversarial Attacks against Deep Neural Networks in Autonomous Driving Systems        |
| 9  | Love Sandholm                           | Open-Source software in HVDC                                                                                              |
| 10 | Max Harrison                            | Bridging Theory and Practice: A Study of Random Hash Functions for Efficient Algorithms and Data Structures               |
| 11 | Francesco Olivieri                      | Underwater rapid environmental assessment using UAVs                                                                      |
| 12 | Perez Yeptho                            | Evaluating the Energy Efficiency of Sparse AI Models                                                                      |
| 13 | Moritz Grüss & Ruxandra-Stefania Tudose | Communication-Efficient Federated Learning for Satellite Constellations                                                   |
| 14 | Vincent de Heij                         | Connected Vehicles as Distributed Observers for Traffic State Estimation (CONVERSE)                                       |
| 15 | Ritvik Mahajan                          | Robust Collaborative SLAM using Kernel methods                                                                            |
| 16 | Lorenzo De Bei                          | Predicting joint moments in different gait patterns using an LSTM network and wearable sensor data                        |
| 17 | Henrique Sambi                          | Enhancing Nuanced Experiential Qualities from Technology-initiated Touch                                                  |
| 18 | Hannah Johnson                          | Embodied Design Speculation Exoskeleton for Moving Bodies through Collective Dance Practice                               |
| 19 | Wilmer Liljenström                      | Methods for Optimizing Vehicle Energy Consumption                                                                         |
| 20 | Marius Fauteux                          | Modernisation and Enhancement of Micro-CT Imaging Workflow for Improved Usability, Efficiency, and Research Accessibility |
| 21 | Oscar Backström                         | Physics-Informed Learning for Multi-Agent Systems                                                                         |
| 22 | Lukas Zeipelt                           | Additive manufacturing for fabricating bioelectronic devices                                                              |
| 23 | Yonis Osman Bileh                       | Digital transformation in water utilities: A challenging journey to smart maintenance                                     |
| 24 | Oskar Hokkanen Eriksson                 | Mixed Reality Micromobility Simulator                                                                                     |
| 25 | Natalia Sempere                         | Exploring Tongue Movement in XR for UI Control & Text Input                                                               |
| 26 | Mattias Bjerklov                        | Cryo-EM image formation model                                                                                             |
| 27 | Alberto Crivelli                        | Development of an Electron-Based Phase Plate for Improved High-Resolution TEM Imaging                                     |
| 28 | Oskar Grönman                           | Controlled Concurrency Testing for Resilient, Scalable Distributed Systems                                                |
| 29 | Shizheng Lin                            | Exploring Multi-Marginal Flow Matching for Probabilistic Forecasting of Time Series                                       |
| 30 | Ke Yang                                 | Digital Voice Personalization: Intrinsic Motivations and Practical Implications                                           |
| 31 | Johan Slettengren                       | Synthetic Data Generation for Anomaly Detection                                                                           |
| 32 | Wouter van Weerelt                      | Real-Time Optimization for the Power Grid                                                                                 |