

Alvise Sembenico

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WORK EXPERIENCE

Klue <i>Senior Machine Learning Engineer</i>	Sep. 2021 – 2024 Amsterdam, NL - Vancouver, BC
<ul style="list-style-type: none">Online data clustering for 1 million data points daily with domain-specific fine-tuned LLM, f-1 score of 0.85.CUDA level optimization for LLM; decrease training time of 42%.End-to-end training of a recommendation system for key events detection with a Hit Rate of 0.8.Constructed a robust data stream and ML pipeline to process over 1 million data points daily.Led and mentored the Machine Learning research and group.	
Intrical AI <i>Founder & AI Lead</i>	Mar. 2020 – Sep. 2021 Amsterdam, NL
<ul style="list-style-type: none">Successfully secured €50,000 in venture capital, which enabled us to double the team size.M&A (mergers and acquisitions) transaction prediction combining historical data and textual information.Supervised research project published in a workshop for unstructured documents data extraction with state-of-the-art results and an increase of 10% from previous results.Created an ML pipeline for real-time data mining and transaction forecast with 5 different ML models.	
Qualcomm <i>Machine Learning Research Intern</i>	Sep. 2019 – Aug. 2020 Amsterdam, NL
<ul style="list-style-type: none">Enhanced state-of-the-art Deep Learning object trackers by developing a mathematical framework that reduces model decay during online learning, improving long-term video tracking performance. Improvement of 3 AUC points.	
University of Amsterdam <i>Teacher Assistant</i>	Feb. 2020 – Dec. 2020 Amsterdam, NL
<ul style="list-style-type: none">Collaborated with professors to develop and execute MSc courses in Artificial Intelligence, focusing on Machine Learning, Deep Learning and Information Retrieval.	

EDUCATION

University of Amsterdam <i>Master, Mathematics</i>	Sep. 2023 - Apr 2025 Amsterdam, NL
<ul style="list-style-type: none">Main track in Analysis and Dynamical systems. Secondary track in Stochastic analysis.Thesis: Deep FBSDE: deep learning to solve path-dependent forward-backward SDE with optimal control applications..Main courses: PDE, Computational Finance, Measure theoretic probability, Stochastic integration, Asymptotic statistics, Numerics for SDE, Dynamical systems, Optimal Transport. 136/120 EC required.Participated in the National Mathematics Congress.Teaching assistant in the Bachelor of Mathematics.	
University of Amsterdam <i>Master, Artificial Intelligence</i>	Sep. 2018 - Aug. 2020 Amsterdam, NL
<ul style="list-style-type: none">Deeply research-driven programme, with a focus on mathematical foundations. I worked on my thesis together with Quva Lab on "Multifaceted Memory Augmentation in Discriminative Object Tracking". Grade: 3.5/4Participated in the NAO team: robotic football competition.	
University of Trento <i>Bachelor, Computer Science</i>	Sep. 2015 - Jul. 2018 Trento, IT
<ul style="list-style-type: none">Final Grade: 100	

SKILLS & INTERESTS

- Competitive programming: (top 1% LC), Second place mathematics Archimedes games 2014*
- Skills: Programming languages: Python, Java, C++, C, Rust, Cuda. Machine learning frameworks: Pytorch, Tensorflow*
- Personal projects: Physics particle engine in C++ ([Github](#)), IMC trading comp ([Github](#)), Math puzzles ([Github](#)).*