

# Alvise Sembenico

[alvise.sembenico@gmail.com](mailto:alvise.sembenico@gmail.com) | [Linkedin](#) | [Github](#)

## SKILLS & INTERESTS

---

- *Competitive programming: (top 1% Leetcode), Specialist on [Codeforce](#). Second place in the mathematics Archimedes games*
- **Skills:** Python, Java, C++. PyTorch, JAX, CUDA.
- **Projects:** Tech lead of 10 people for Lead the Future organization, Physics particle engine in C++ ([Github](#)), IMC trading comp ([Github](#)), Math puzzles ([Github](#)).

## WORK EXPERIENCE

---

### Senior Machine Learning Engineer

Sep 2021 – Jan 2024

*Clue* *Amsterdam, NL - Vancouver, BC*

- Built and trained a five-model NLP pipeline: custom NER, text-tabular fusion, and ANN retrieval, that set new in-house state-of-the-art F1 (+0.15) and raised user engagement 12 %.
- Introduced a task-specific classification head for NER, lifting recall by 0.20 without sacrificing precision.
- Designed & trained a custom T5-based attention model for real-time clustering, boosting F1 from 0.70 → 0.85 and lifting user engagement 12 % (+5 % dwell time) in A/B tests.
- Led a 4-engineer team to ship a low-latency recommender-system API backed by vector search and Elasticsearch, reliably serving 2 M req/day at p99 = 95 ms with 99.99 % uptime.

### Founder & AI team lead

Jun 2020 – Sep 2021

*Intrical AI* *Amsterdam, NL*

- Designed a multimodal Transformer for M&A transaction prediction, fusing news text, financial series, and temporal signals; reached F1 0.80, outperforming baseline models by 20 pp.
- Architected a real-time ML pipeline in Python + AWS (DynamoDB, SageMaker, Lambda, Beanstalk) that processes 2 M news articles/day, auto-scales 2x under peak load, and trimmed manual triage effort 80 %.
- Led research on long-context document understanding (>1k tokens); co-authored two workshop papers and mentored two junior researchers..

### Machine Learning Research Intern

Sep 2019 – Jun 2020

*Qualcomm* *Amsterdam, NL*

- Invented & prototyped three decay-mitigation techniques for state-of-the-art deep object trackers, boosting long-video AUC by 12 points on LaSOT & OTB-100 benchmarks (PyTorch).

### Software engineer

Aug 2018 – Aug 2019

*Maykin Media* *Amsterdam, NL*

- Developed a full-stack application for automated API contract testing of applications running on Kubernetes.
- Stack: Django on K8S with Jenkins for CI/CD.

### Software engineer

Feb 2017 – Jun 2018

*Sidera HR* *Trento, IT*

- Developed the employee compensation payments system for an HR software in Java using Spring Boot with Spring MVC. Automated tax declarations to reduce user time by 15%.

## EDUCATION

---

### University of Amsterdam

Sep 2023 - Aug 2025

*Msc. Mathematics* *GPA: 3.7*

- Track in Stochastic Analysis. Developed a deep learning based algorithm for forward energy price.
- Thesis: Deep learning numerical methods for Stochastic Partial Differential Equations in Hilbert space.

### University of Amsterdam

Sep 2018 - Aug 2020

*Msc. Artificial Intelligence* *GPA: 3.75*

- Relevant courses: High-performance computing, distributed systems, Machine Learning, Deep learning, Computer Vision, NLP.

### University of Trento

Sep 2015 - Jul 2018

*Bachelor, Computer Science* *GPA: 3.72*