Alessandro **Sanvito**

Software and AI Engineer

Gijsbrecht van Aemstelstraat 23, 1091 TB Amsterdam, Netherlands

(+39) 331 703 7925 | alessandro.sanvito@gmail.com | alexdruso.github.io/ | Alexdruso | alessandro-sanvito | Alessandro Sanvito

Experience

Optiver
Amsterdam, Netherlands

Software Engineer
August 2023 - Current

- Developing and optimizing high-performance, low-latency C++ and Python systems for mission-critical financial applications.
- Collaborating with multidisciplinary teams to implement scalable, efficient software solutions in latency-sensitive environments.
- Gaining expertise in algorithm design and parallel computing, relevant for real-time AI-driven applications.

Mercedes-Benz (AI-SEE Project)
Stuttgart, Germany

AI Research Intern and Master Thesis Student
May 2022 - June 2023

- Conducted cutting-edge research on 3D human avatar modeling from monocular video data in diverse real-world environments.
- Designed and implemented generative neural models, including NeRFs and Diffusion Models, to improve computer vision performance in adverse weather conditions.
- Collaborated with a cross-functional R&D team to refine innovative ideas, resulting in a publication at ICCV (International Conference on Computer Vision).
- Leveraged skills in deep learning, 3D modeling, and generative AI to push the boundaries of digital character creation and visualization.

Education

KTH Royal Institute of Technology
Stockholm, Sweden

MSc. in ICT Innovation, Data Science
Sept. 2020 - May 2023

- Final grade: A - Excellent
- Implemented from scratch a diverse range of neural network architectures in NumPy, including MLPs, Hopfield Networks, and Deep Belief Networks.
- Reproduced data mining-related papers in Python and Java.

Polytechnic University of Milan
Milan, Italy

MSc. in Computer Science and Engineering
Sept. 2020 - Jul. 2023

- Final grade: 110/110 cum laude
- Developed a winning ML solution on the Twitter dataset for the international RecSys Challenge 2021 with the university team under the supervision of prof. Paolo Cremonesi with Dask, Catboost, and XGBoost.
- Built a recommender system for a book catalogue with NumPy, SciPy, and Pandas.

Polytechnic University of Milan
Milan, Italy

BSc. in Engineering of Computing Systems
Sept. 2017 - Jul. 2020

- Final grade: 109/110
- Implemented a cardboard game in Java, performing extensive testing with JUnit and Mockito.
- Created a performance oriented graph manipulation tool in C.

Publications

2023	**ScatterNeRF: Seeing Through Fog with Physically-Based Inverse Neural Renderings**, Ramazzina Andrea, Bijelic Mario, Walz Stefanie, Sanvito Alessandro, Scheuble Dominik, Heide Felix	*ICCV 2023*
2022	**United We Stand, Divided We Fall: Leveraging Ensembles of Recommenders to Compete with Budget Constrained Resources**, Maldini Pietro, Sanvito Alessandro, Surricchio Mattia	*ACM recsys'22*
2021	**Lightweight and Scalable Model for Tweet Engagements Predictions in a Resource-constrained Environment**, Carminati Luca, Lodigiani Giacomo, Maldini Pietro, Meta Samuele, Metaj Stiven, Pisa Arcangelo, Sanvito Alessandro, Surricchio Mattia, Maurera Fernando B. Peréz, Bernardis Cesare, Ferrari Dacrema Maurizio	*ACM recsys'21*

Skills

Programming	Python, C++, SQL, Java, C, LaTeX
Machine Learning	Pytorch, Tensorflow, MLlib, scikit-learn, Optuna, Catboost, XGBoost, NumPy, SciPy
Data processing	Pandas, Dask, Spark, Spark Streaming, GraphX, MySQL
Visualization	Seaborn, Maplotlib, Plotly