



Simone Zamboni

Machine Learning Research Engineer

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Technical Skills

- Artificial Intelligence:
 - Transformers models
 - Pytorch and transformers library
 - Natural Language Processing (NLP)
 - Computer Vision (CV)
 - Machine Learning (Scikit-learn)
- Software Development:
 - Python (with Numpy and Pandas)
 - Database and SQL
 - Rust
 - GIT version control
- Software Deployment:
 - Google Cloud Platform (GCP)
 - Amazon Web Services (AWS)
 - Docker
 - Terraform

Soft Skills

- Problem Solving
- Public Speaking
- Team Work
- Tutoring

About me

- Videogames: When it's time to relax
- Fitness: to stay healthy and active
- Swedish: B1, actively learning it

Summary

Currently Machine Learning Research Engineer at Embark Studios exploring large language models for video game characters. Previously Machine Learning Developer at Substorm AB and Master Degree in Autonomous Systems at KTH. Accomplishments include publishing a journal research article based on my master thesis at SCANIA and presenting results on language models for video game characters at conferences.

Working Experience

- 03/2022 – today **Machine Learning Research Engineer** *Embark Studios (Stockholm)*
Machine Learning Research Engineer at the video game company Embark Studios, researching how to use large language models to make video game characters come alive. My responsibilities include: keeping up to date with the latest research, fine-tuning language models with python and Pytorch, help with their deployment and develop on the game client which is written in rust.
- 10/2020 – 02/2022 **Machine Learning Developer** *Substorm AB (Stockholm)*
Machine Learning Developer at Substorm AB, a consultancy company specialized in AI. Experience mainly in Natural Language Processing(NLP): Python, Pytorch, Keras and Scikit-learn for development and AWS, Docker, Azure Pipelines and Terraform for deployment. Additionally, I supervised a master thesis student from KTH on a deep Reinforcement Learning thesis project.
- 01/2020 – 06/2020 **Machine Learning Engineer Intern** *SCANIA Group (Södertälje)*
Master thesis in the SCANIA Autonomous Driving Research Section with a project about pedestrian trajectory prediction with deep learning. Published my thesis in the journal Pattern Recogniton.
- 02/2018 – 05/2018 **Software Developer Intern** *Okkam s.r.l. (Trento, Italy)*
Internship in which I developed an Android app for restaurants.

Education

- 09/2018 – 07/2020 **Double Master Degree in Autonomous Systems, between KTH and the University of Trento**
Double Master Degree between the University of Trento (first year, in Italy) and KTH (Stockholm, second year), focused on Artificial Intelligence and Robotics. Topics addressed include: machine learning, deep learning, reinforcement learning and robotic path planning.
- 2015 – 2018 **Bachelor's Degree in Information Engineering at the University of Trento**

Publications

"Pedestrian Trajectory Prediction with Convolutional Neural Networks", published in the Pattern Recognition Journal, Volume 121, January 2022. Article based on my thesis work at SCANIA, in which I developed a convolutional neural network for pedestrian trajectory prediction able to achieve state-of-the-art results. [Link to article](#).

Presentations

Presented my current work at Embark Studios, with the title "*Making game characters come alive with language models*", at the 2023 Nexon Developer Conference (Korea), at Dreamhack 2023 Jönköping and at Everything Procedural 2024 (Breda, NL).

Projects at github.com/SZamboni/

- (2019) Reproduce with Pytorch a paper presented at NIPS2019 ([link](#)).
- (2019) Pedestrians detection model for images taken at night ([link](#))
- (2019) Generate faces using Generative Adversarial Networks (GAN) ([link](#))
- (2018) Robotic path planning and Computer Vision in C++ with OpenCV ([link](#))