Artur **Jesslen**

Machine Learning / Computer Vision / Data science Internship

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EXPERIENCES

Machine Learning Researcher

Midokura

📅 Feb 2021 – Aug 2021   📍 Barcelona, Spain

Midokura provides the integration of Artificial Intelligence into the Edge, moving the AI from the cloud to the device allowing to achieve complex tasks on mobile devices with low capacity.

Skills: Pose estimation, Amazon Web Services (AWS), Tensorflow, Keras, TFLite, Quantization, Docker.

Software programmer

Startup Ouay

📅 Jul 2019 – Feb 2021   📍 Lausanne, VD, Switzerland

Ouay provides a solution for the elderly to keep their autonomy at home. We develop a voice-based interaction platform that connects elderly, nurses, family members, and smart things. Ouay keeps up to date family members about their parent's health and life.

Skills: Google Cloud Platform (GCP), database creation and management from created web interface (MySQL, HTML, Javascript, CSS) using APIs (PHP).

Board member

Entrepreneur Club EPFL

📅 Oct 2019 – Ongoing   📍 Lausanne, VD, Switzerland

Entrepreneur Club EPFL brings entrepreneurial-minded people together and support them in the execution of their ideas. We accelerate students' projects/startups with workshops and services hosted at their co-working space.

Skills: Web-development, logistic management, mentors and speakers recruitment.

Student assistant

Swiss Federal Institute of Technology - EPFL

📅 Sep 2017 – Jan 2021   📍 Lausanne, VD, Switzerland

- Teaching analysis for bachelor students.
- Teaching object oriented programming and supervision of semester projects in C++ for bachelor students.

Animation of scientific workshop

EPFL science promotion department

📅 Sep 2019 - Apr 2020   📍 Lausanne, VD, Switzerland

Introduction of scientific concepts present in our everyday life. Supervision of high potential middle-school students during realisation of scientific experiments. Children mentoring during project preparation.

ABOUT ME

I'm always *dynamic* and eager to *learn* new skills. Very interested in *robotics* and more specifically *autonomous vehicles, computer vision and machine learning*, I constantly try to undertake new challenges. My *openness* and *reliability* are key strength to build relations and a *collaborative* atmosphere with my co-workers.

COMPETENCES

Personal

Continuous learning, self questioning, proactivity, autonomous, take initiative, listening and public speaking, clear communication.

Programming

Python (Pytorch, TensorFlow, Keras), C/C++, PHP, Java, Matlab, HTML, Javascript, MySQL, Assembly, Linux, LaTeX, Office 365.

Robotics and Data Science

Model predictive control, drones, machine learning, deep learning, computer vision, data analysis, data visualization.

Product design

3D printing, laser cutter, CNC, milling, drilling, turning.

LANGUAGES

French	Mother tongue
English	Full professional proficiency
German	Professional proficiency
Spanish	Elementary notions
Estonian	Elementary notions

PERSONAL INTEREST

Technology
Technology enthusiast, UX and UI design, computer vision, drone FPV.

Sports & activities
Diving, running, cycling, motorcycling, snowboard.

PROJECTS

Generation of multi-modal distribution using cVAE (conditional Variational Auto Encoder) for trajectory prediction [Report]
VITA Laboratory (Visual Intelligence for Transportation)

📅 Aug 2020 - January 2021

The project consists in generating multi-modal distribution of the human trajectories forecasting by learning a representation of human social interactions using state-of-the-art deep learning methods (and more particularly cVAE).

Skills: Python programming, Pytorch library, Deep Learning methods.

Real-time estimation of ground reaction forces during human gait
Biorobotics Laboratory

📅 Jan 2020 - Jun 2020

The project consists in creating a model for predicting ground reaction forces in the context of human/animal locomotion for real-time application using Inertial Measurement Units.

Skills: Python and C++ programming, OpenSim software.

Machine Learning
Course projects

- Image segmentation of aerial satellite images to identify roads from background using machine learning algorithms (Convolutional Neural Network).
- Efficiency comparison of the most known Neural Networks architectures to solve a simple task. Analysis of the effects of some added features (dropout, connection skipping, ...).

Skills: Python programming, Keras library, Pytorch Library, Tensorflow.

MPC Controller
Course project

Implementation of a Model predictive control controller (both linear MPC and nonlinear MPC) to fly a quadcopter in simulation environment.

Skills: Matlab programming.

Deep learning framework implementation
Course project

This project aims to implement a basic Deep Learning framework based on the Pytorch library tensor operations. The framework implements some Linear and convolutional neural network modules.

Skills: Python programming, Pytorch Library.

Image analysis
Course project

This project aims to find and solve a math problem using image analysis and pattern recognition.

Skills: Computer vision, Python programming.

EDUCATION

M.Sc. in Robotics, Minor in Data Science
Swiss Federal Institute of Technology - EPFL

📅 Sept 2019 – Ongoing   📍 Lausanne, Switzerland

#14 ranked University worldwide
#6 ranked University in Europe
Specialization in Mobile Robotics.

Exchange year
Nanyang Technological University - NTU

📅 July 2018 – June 2019   📍 Singapore

#6 ranked Engineering School worldwide
Exchange year in the school of electrical and electronic engineering.

B.Sc. in Microengineering
Swiss Federal Institute of Technology - EPFL

📅 Sept 2016 – July 2019   📍 Lausanne, Switzerland

#14 ranked University worldwide
#6 ranked University in Europe
Multidisciplinary curriculum including mechanical engineering, electronic engineering, materials science and computer science.