

Brian Pulfer

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EDUCATION

USI - University of Southern Switzerland

Master Degree in Artificial Intelligence

Lugano, TI, CH

Aug. 2019 – Jun 2021

SUPSI - University of Applied Sciences of Southern Switzerland

Bachelor Degree in Computer Science (GPA: 4.87/6)

Manno, TI, CH

Aug. 2016 – Jun 2019

EXPERIENCE

Hackathons & Competitions

Nov. 2019 – Today

- START Hack 2021
- USI Hackathon 2019

Machine Learning Intern

July 1st, 2020 – August 31st, 2020

University of Southern Switzerland

Lugano, TI, CH

- Automatic collection and cleaning of a dataset through web crawling and heuristics such as feature extraction, clustering and outlier identification.
- Used the Tensorflow Keras framework for transfer learning of various image-classification models such as VGG-16, VGG-19, GoogLeNet, DenseNET and similars.
- Used the Pytorch framework for image segmentation and object detection with known architectures such as Single-Shot Detector (SSD) and YOLO.

Business Employee

Jun. 2016 – August 2016

KazMunayGas Trading AG

Paradiso, TI, CH

- Creation of a digital database of past invoices and documents that were only physical.

Broadcast soldier

Mar. 2015 – January 2016

Swiss Army

Wangen an der Aare, BE, CH Bremgarten, AG, CH Lenzerheide, GR, CH

PROJECTS

Master Thesis | Python3, C#, Donkey, Unity, Git, Conda, cv2

September 2020 – June 2021

- Assembled a physical DonkeyCar using a JetsonNano computer and an RC car.
- Created a simulated scene of a real-world lab room in Unity. Improved the Unity simulator to log testing metrics.
- Collected data, trained and tested different DL models for self-driving in the simulated and real world tracks.
- Adapted CycleGAN to translate simulated images to real ones and train a real-world Cross-track-error predictor.

Bachelor Thesis | Python3, Git, Unittest, Gensim, PyJNius, Keras, SkLearn

May 2019 – Sep 2019

- Developed a binary classifier machine learning model that can tell if two scientific articles from the PUBMED database were published by the same author. Work commissioned by La Roche AG.
- Implemented feature extraction code, also using a Java library inpython through the PyJNius library. Used the Gensim library to apply doc2vec techniques, a novelty in the literature of AND.
- Trained and tested different models: KNN, SVM, Random Forest and Feed-Forward Neural Networks.
- Studied ambiguity level in the PubMed dataset by counting the cardinality of the namespaces.

LEADERSHIP & AWARDS

Formula USI organizer

Nov. 2020 – Today

Lugano, TI, CH

- Organizer of the first edition of the Formula USI competition by the University of Southern Switzerland.

Winner of the SODESKA scholarship

April 2021

Lugano, TI, CH

- I won a scholarship awarded to the 5 swiss students which obtained the highest GPA at USI (University of Southern Switzerland) during their previous year of studies (minimum 54 ECTS).

TECHNICAL SKILLS

Languages: Python, Java, HTML/CSS/JavaScript, C#, C/C++, SQL

Frameworks: Pytorch, Tensorflow, Keras, Unity, Unittest, Node.js, React, Bootstrap

Developer Tools: Git, Bash, Docker, PyCharm, IntelliJ, WebStorm, Anaconda / Conda, Postgres, Visual Studio

Libraries: Scikit Learn, OpenCV 2, NumPy, Matplotlib, Pandas