Loïs Bilat

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Swiss

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EDUCATION

Master of Science in Computer Science
EPFL

📅 2018 – 2020   📍 Lausanne, Switzerland

- Specialization : Data Analytics
- Semester project : Audio Denoising with Generative Models - 6.0 / 6.0
- Master Thesis : Cross-lingual Toxicity Detection - 6.0 / 6.0
- Final GPA : 5.83 / 6.0

Bachelor of Science in Computer Science
EPFL

📅 2015 – 2018   📍 Lausanne, Switzerland

- Optional Track : Visual Computing
- GPA : 5.47 / 6.0
- Study exchange at Linköping Universitet, Sweden. 2017 – 2018, GPA : 5.97 / 6.0

Maturité Gymnasiale
Gymnase de Burier

📅 2012 – 2015   📍 La Tour-de-Peilz, Switzerland

- Options : Physics and application of Mathematics, Computer Science
- GPA : 5.32 / 6.0

EXPERIENCE

Data Scientist
ELCA Informatique SA

📅 2020 - ongoing   📍 Lausanne, Switzerland

- Developped Data Science and Machine learning solutions for clients in various industries (Pharmaceutical, Insurance, Defense, Manufacturing, Energy).
- Developped search engines, web scraping pipelines, recommendation systems, market scouting, competitive intelligence systems, forcasting models, data pipelines, speaker biometrics models, IoT monitoring platforms.
- Contact with clients, Elaboration of offers, Software architecture, Project lead.

Master Thesis / Internship
EPFL / ELCA Informatique SA

📅 2020   📍 Lausanne

- Developped a cross-lingual toxicity detection system using advanced Transformer-based models

Student Assistant
EPFL

📅 2019 - 2020   📍 Lausanne, Switzerland

- Student assistant for a computer science course given to mathematics and physics bachelor students (ICC - Information, Calcul et Communication)
- Helping them with C++ assignement and various theoretical exercices

Summer Job in an Architectural Firm
ABA Partenaires SA

📅 2018   📍 Lausanne, Switzerland

- Modification and correction of blueprints
- Processing replies to requests for tender

Web development
🔗 **yvesbilat.ch**

📅 2016

- Creation of a website for an entrepreneur using WordPress

LANGUAGES

French - Mother Tongue	●●●●●
English - B2	●●●○○
German - B2	●○○○○

PROGRAMMING LANGUAGES

Python	●●●●●
Java	●●●●○
Scala	●●●●○
HTML/CSS/Javascript	●●●●○
SQL	●●●○○
C/C++	●●●○○

SKILLS

Machine Learning

Natural Language Processing   Computer Vision   Deep Learning   Data Analysis   Transformers   Voice biometrics   Time Series forecasting   NER

Software

Python   FastAPI   Streamlit   ELK stack   Neo4j   FastAPI   Spark

Cloud

Azure DevOps   Azure AKS   Azure Storage   Azure Stream Analytics   Azure Cognitive Search   Azure IoT Hub   MongoDB Atlas   Databricks

Applications and Environments

VS Code   Git   Docker/Kubernetes   Jupyter Notebooks

Operating Systems

Linux (Archlinux, Ubuntu)   Windows 10

PROGRAMMING PROJECTS

Cross-lingual Toxicity Detection
⚓ Master Thesis

📅 2020   📍 EPFL - ELCA Informatique SA

With the increasing use of social media, there is a critical need for performant automatic moderation tools. In this thesis, we present advanced classifiers that can detect hateful and offensive content in short texts. We study various architectures based on transformer models such as BERT and evaluate multiple changes to those models that improve their performance. We then tackle cross-lingual classification and introduce new architectures that use joint-learning and data translation. Our models are able to outperform existing multilingual models on zero-shot and multilingual classification. `PyTorch` `Transformers` `Docker`

Denoising with Generative Models
⚓ Semester Project

📅 2019 - 2020   📍 EPFL - VITA Lab

Generative adversarial networks have often been used for image processing (for instance denoising and super-resolution). However, those techniques are less common in audio applications. The goal of this project is to first evaluate state-of-the-art techniques for audio denoising and audio super-resolution, and then to try to apply some of the Generative methods used in image processing to audio processing. `Python` `PyTorch`

Detecting Bias in Amazon reviews
⚓ Course Project

📅 2018   📍 EPFL

A Data Story about the potential bias that can be found in Amazon user reviews, and how to correct it. We worked on 20GB of comments extracted from various Amazon articles, and used multiple tools including Pandas, pyspark, and matplotlib. `Python` `Pandas` `Matplotlib` `Jupyter notebook`

The Quest for The Holy Grail
⚓ Course Project

📅 2018   📍 LiU

Creation of a 3D maze game with different objectives, world physics, lightning effects, drawing optimisation. user interface and sound effects. `C` `OpenGL`

Tankode
Junction Hackathon

📅 2017   📍 Helsinki, Finland

Creation of an educative video game where the behavior of a Tank had to be programmed by the user. This game was programmed in less than 48 hours using Android Studio, in a team of 4 people. I had the opportunity to learn how to work efficiently in a team by splitting the work in an optimal way. `Java` `Android Studio`

3D game - Tangible user interaction
Course Project

📅 2017   📍 EPFL

Creation of a dexterity 3D game where the environnement had to be controled by moving a LEGO board in front of a camera. It implemented some image processing and recognition and was done using *Processing*. `Java`

XBlast
Course Project

📅 2016   📍 EPFL

Creation of a multiplayer video game based on the game *Bomberman*. It could be played by up to 4 player on different computers. `Java`

Calcul Mental
⚓ Android Application

📅 2015

Creation of an Android app that people can use to do some small calculations (additions, substractions, multiplications and divisions). Different modes, such as a test mode, a timed mode and a rush mode are available. `Java` `Android Studio`

La Pipopipette
⚓ Travail de Maturité

📅 2014   📍 Gymnase de Burier

Creation of a multiplayer video game for iOS based on the game *Dots and Boxes*. An artificial Intelligence was implemented. `Objective-C` `Xcode`