MATHEUS V. BERNAT

INTRODUCTION

Hard-working last year master student with a GPA of 4.77/5.0, I am **Brazilian**-made, **Swedish**-formed and currently being **Swiss**-fine-tuned. As a person, I am kind, adaptable, and responsible. Having work experience in both academia and industry, I enjoy applied research, especially in the fields of computer vision, signal processing, and ML. I am now looking for a **master's thesis in Fall 2022**.

PERSONAL INFO

Chemin du Couchant 15, 1007 Lausanne, Switzerland

+41 782310010

matheus.bernat@gmail.com

linkedin.com/in/matheus-bernat

github.com/matheus-bernat

matheus-bernat.github.io

Age: 23 (October 7, 1998)

Nationality: Brazilian

SUMMARIZED TECH-SKILLS

- Python, C++, MATLAB
- Machine learning, mathematical modeling, statistical data analysis
- Computer vision: 3D reconstruction, image classification, object tracking
- Pytorch, Pandas, OpenCV, Numpy
- Embedded systems, ROS

LANGUAGES

Portuguese, Swedish: Native

English: C2

French: B2

EDUCATION

École Polytechnique Fédérale de Lausanne (EPFL), Exchange year
Fall 2021-Spring 2022 (ongoing)
Relevant courses: Applied data analysis, Visual intelligence, Statistics for data science, Image processing, Computers and music.

Linköping University, M.Sc. Computer Science and Engineering, 4.77/5
Fall 2017-Spring 2023 (expected graduation February 2023)
Relevant courses: Machine learning, Neural networks, Signal processing, Statistical sensor fusion, Computer vision, Advanced linear algebra.

PROJECTS

EPFL, Computer vision, and Data analysis, Fall 2021
Compared the abilities of vision transformers and CNNs to detect semantic out-of-distribution data in the Visual intelligence class. Conducted data analysis on a dataset of 178 million quotations to understand who has a voice in the English-speaking media in the Applied data analysis class. Tech: Pytorch for object classification, Pandas, statistical data analysis, clustering.

EPFL, Semester Project at DLAB, Spring 2022
Developing a classification taxonomy to label images in Wikipedia, and a deep learning model for image classification and embedding. Tech: Pytorch for image classification, Wikimedia.

Linköping University, Computer vision, Spring 2021
Completed two projects in the class of computer vision: object tracking and 3D multiview reconstruction. Tech: Pytorch for bundle adjustment, multi-view geometry, statistics (Gaussian mixture models, Kalman filter).

WORK EXPERIENCE

Linköping University, Course & lab assistant 2019–Present
Responsible for writing the final quizzes, correcting written questions, and for the general administration of the Elements of AI class. A total of 1,242 students have passed the course since I started. Correcting the four MATLAB labs of the 300 undergraduate students for the Signals and Systems class. Learned to be responsible and to deal with students. Tech: Python scripts, MATLAB. Soft: responsibility, teaching.

UMS Skeldar, Engineering intern, Summer 2021
Worked with mathematical modeling of sea and ship motion, and further simulation in MATLAB. The achieved simulations were used as a proof of concept to the company to further develop simulations of UAVs landing on moving ships. Tech: MATLAB, physical modeling.

Veoneer, Software engineering intern, Summer 2020
Built, in a team of 3, a new platform to follow the course of one's commits. The platform is up and running and is used by the 200 engineers in the company's site in Linköping. Tech: conceptual design, Vue.js, FastAPI. Soft: agile development, teamwork.