



MATHEUS V. BERNAT

INTRODUCTION

Hard-working last year master's student with a GPA of 4.77/5.0, I am **Brazilian-made**, **Swedish-formed**, and currently **Swiss-fine-tuned**. As a person, I am kind, adaptable, and responsible. Having work experience in academia and industry, I enjoy applied research, especially in computer vision and ML. I am now looking for a **full-time position starting in mid-February 2023**.

PERSONAL INFO

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🐙 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, Tensorflow, Pandas, OpenCV, Numpy
- Embedded systems, ROS

LANGUAGES

Portuguese, Swedish: Native

English: C2

French: C1

EDUCATION

École Polytechnique Fédérale de Lausanne (EPFL), Exchange year
Fall 2021-Spring 2022

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 January 2023)

Relevant courses: Machine learning, Neural networks, Signal processing, Statistical sensor fusion, Computer vision, Advanced linear algebra.

PROJECTS

EPFL, Semester project and Master thesis at DLAB, Spring 2022-Fall 2022

Developing a classification taxonomy to label images in Wikipedia, and a deep learning model for image classification and embedding. [Tech: Deep learning with Tensorflow.](#)

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.](#)

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 \(Gaussian mixture models, Kalman filter\).](#)

Linköping University, Robotics, Fall 2018-Spring 2021

Competed in Sydney, Australia, in service robotics at the world competition RoboCub@Home in 2019. Developed the NLP module responsible for making the robot converse. [Tech: Python, ROS, team-work.](#)

WORK EXPERIENCE

Linköping University, Course & lab assistant 2019–Fall 2021

Responsible for writing and correcting tests, and for the general administration of the Elements of AI class. A total of 1,300 students have passed the course since I started. Correcting the four MATLAB labs of the 300 undergraduate students for the Signals and Systems class. [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 three, 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.](#)