Théo Fuhrmann

contact

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languages

Spanish (native)
French (native)
Catalan (native)
English (C1, fluent)

programming languages

Python, C++, Scala, Java, JavaScript, Terraform

machine learning

PyTorch (+ Lightning), Sklearn, TensorFlow, WandB

computer vision

OpenCV, Pillow

Audio ML & DSP

librosa, Essentia, RAVE

back-end

Django, PostgreSQL, REST APIs, Node.js, Scala

cloud & devops

AWS, Docker, GCP, Apache Airflow

music

Piano, Ableton

profile

Currently pursuing a master's in **Sound and Music Computing** at Universitat Pompeu Fabra, I bring a solid foundation in **machine learning** and **computer vision** from my previous role at Silt, a digital identification startup, as well as recent experience as a Machine Learning Engineer intern at SoundCloud, where I developed **large-scale data pipelines** and **audio recommendation** systems. I hold a degree in **Computer Science** from the Polytechnic University of Catalonia (UPC), with a specialization in Artificial Intelligence and algorithms. I have a mix of solid academic training and practical experience, and I enjoy working with others to take on challenging, creative problems.

education

Master's degree in Sound and Music Computing

2024–Pres

@ Universitat Pomeu Fabra (UPF) — *Barcelona*

- Master's thesis on improving audio source separation by leveraging multimodal visual cues, combining computer vision and audio processing techniques.

Bachelor's degree in Computer Science

2018–2022

@ Universitat Politècnica de Catalunya (UPC) — *Barcelona*

- Specialization in Computation (AI, algorithms, data science and logic)

experience

Machine Learning Engineer Internship

Jun-Aug 2025

@ SoundCloud - Music streaming platform for artists and listeners — *Berlin*

- Developed and deployed the "Liked By" homepage module, surfacing playlists of liked songs from followed users; contributed to increased user engagement. Set up A/B tests with Statsig.
- Built Airflow DAGs for "Liked By" and album recommendation modules, triggering BigQuery SQL pipelines and Dataflow jobs to populate BigTable; contributed to Scala-based API integration.

AI Specialist in Computer Vision

Oct-Oct 2022-24

@ Silt - Digital identity verification platform using AI and computer vision — *Barcelona, Remote*

- Engineered neural networks using convolutional layers and known backbones with PyTorch and monitored their performances with WandB.
- Developed ML models for multiple identity documents (national IDs, passports, driving licenses, etc.), selfie, and selfie video recognition.
- Generated multiple synthetics datasets (MRZ images, IDs and MRZs with organic overlays, etc.) for data augmentation.
- Improved the accuracy of previous anti-spoof models by developing an image recapture detector using the aforementioned datasets, while also expanding the spoof categories.
- Performed multiple back-end and MLOps tasks, such as integrating ML/LLM models with the back-end infrastructure and optimizing the company's ML lifecycle.

Full-Stack Developer

Feb-July 2022

@ Discoverfy - SaaS platform with interactive e-commerce tools — *Barcelona*

- Designed and developed new front-end and back-end features following Agile and Scrum.
- Troubleshooted API data, UI, and UX inconsistencies using PostgreSQL, Node.js & React.
- Integrated Shopify installation methods to run the product on the Shopify platform.
- Implemented a new interface for the product's landing page.

projects

Weathered Chaos

Mar 2025

- Music conditioned by the current weather and double pendulums using RAVE and MIDI.

Liquiprism

Dec 2024

- Implemented the LiquiPrism paper and developed an immersive visualizer and sonifier.

Cybervulnerability Exploitability Classifier

Feb-June 2022

- Trained various machine learning models with gathered CVE data to predict the potential exploitability of cybervulnerabilities

Voice-Sex Recognition Classifier

Feb 2019

- Found patterns given various voice features to recognize the sex of the speaker using neural networks and other machine learning models.