Raphaël Attias

Full-Stack Software Engineer at Databricks

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Professional Experience

Software Engineer, Databricks 05/2023 – present
- Full-stack development within the Jobs & Workflows team. Amsterdam, Netherlands
- Worked with React and Scala on Jobs Scheduling and Orchestration.
- Contributed to new internal and customer facing products bringing +2M$ ARR.

Software Developer, University of Geneva 09/2022 – 12/2022
- Developed in Python a web library for understanding energy needs with graph modeling. Geneva, Switzerland
- Contributed to an existing framework by adding key features when handling networks and geodata.

Software & Research Intern, NEC Laboratories America 02/2022 – 08/2022
- Tested data augmentation techniques in order to improve model generalization for the segmentation of cancer cells in whole-slide pathology images. Princeton, USA
- Contributed to the existing framework in Pytorch by implementing an uncertainty estimator.

Machine Learning Intern, Arcanite 07/2021 – 09/2021
- Implemented a Generative Adversarial Network (GAN) to produce images of handwritten text. Lausanne, Switzerland
- Wrote a Python library using Pytorch Lightning using the original work of GANWriting (2021).

Education

Harvard University, Postgraduate Researcher Fellow 09/2022 – 03/2023
- Develop advanced Machine Learning methods to analyze slide pathology images. Boston, USA
- Motivated Self-Supervised Learning for detecting regions of interest in an unlabeled set of slide images.
- Implemented Transformers Interpretability methods for interpretations of pathological predictions.
- Extend the existing framework by implementing and testing Convolutional Nets, Vision Transformers, and other state-of-the-art models using Pytorch.

Swiss Federal Institute of Technology (EPFL), Master Degree in Computer Science 09/2020 – 03/2023
Focus on Machine Learning, Data Science, and Computer Vision. GPA: 5.51/6 (Swiss), 3.64/4 (US) Lausanne, Switzerland

Swiss Federal Institute of Technology (EPFL), Bachelor Degree in Mathematics 09/2017 – 09/2020
Focus on Numerical Analysis, Statistics, and Numerical Optimization. GPA: 5.06/6 (Swiss), 3.37/4 (US) Lausanne, Switzerland

Projects

Movie Recommendation System in Spark for Big Data, Grade: 90/100 2021
Reached SOTA performance on a recommander system on the MovieLens dataset using Spark in Scala.

Robust Journey Planning for CFF Zurich, Grade: 100/100 2021
Built in group a journey planner using Swiss transportation dataset with PySpark, BeHive, and Kafka.

Robust Deep Learning Diagnosis of Pneumonia from Chest X-ray Data, Grade: 90/100 2021
Implemented and tested a self-supervised learning model to detect pneumonia from chest X-rays.

Reinforcement Learning for moon landing in OpenGym, Grade: 90/100 2021
Implemented in Tensorflow an agent to perform moon landing using Q-Learning.

Publications

Quantification of the suitable rooftop area for solar panel installation from overhead imagery using Convolutional Neural Networks, Journal of Physics 09/08/2021

Skills

Back End — Python, Scala, Bazel • **Front End** — Typescript, React, Cypress, Jest • **Machine Learning** — Python, Pytorch, Lightning, Tensorflow, Scikit, Huggingface, Wandb

Reference Letters

Prof. Martin Jaggi, *Professor of Machine Learning,* EPFL

Dr. Eric Cosatto, *Senior Researcher,* NEC Labs America

Prof. Kun-Hsing Yu, *Professor of Biomedical Informatics,* Harvard Medical School