

# Ayoub Abraich

Evry, France • abraich.jobs@gmail.com

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## Data Scientist | AI Research Engineer

Versatile Data Scientist and Python Expert with a Master's in Data Science and a Bachelor's in Applied Mathematics. Over 4 years of experience in data analysis, machine learning, and deep learning, specializing in healthcare and finance. Proficient in Python, committed to AI ethics, and adept at code reviews. Eager to contribute expertise to impactful projects and open to collaborative opportunities for continuous learning.

### WORK EXPERIENCE

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**LaMME** • Evry, France • Full-time • 04/2020 – Present

#### AI Research Scientist

- Led creation and deployment of advanced deep learning models for causal effects, utilizing PyTorch and TensorFlow. Conducted pioneering research in causal inference, enhancing predictive accuracy in complex data landscapes. Implemented domain adaptation strategies, optimizing model performance across diverse domains. Played a key role in cross-functional collaboration, designing experiments, analyzing outcomes, and providing actionable insights. Innovated methodologies for integrating causality into deep learning models, advancing industrial applications.
- Published research in prestigious journals, presented findings at conferences, contributing to the scientific community. Stayed current with deep learning, causality, and domain adaptation, applying knowledge for impactful results. Mentored junior team, fostering continuous learning and knowledge sharing. Proficient in FastAPI, Flask, with expertise in end-to-end solution deployment.  
<https://arxiv.org/abs/2203.15672>

**Malt | Upwork** • Paris, France • Part-time • 09/2019 – Present

#### Data Scientist Freelancer

- **Data Analysis and Visualization:** Applied advanced statistical techniques to distill meaningful insights from intricate datasets. Translated findings into compelling visualizations for actionable outcomes. **Machine Learning and Predictive Modeling:** Designed and implemented machine learning models, leveraging classification, regression, and clustering algorithms to optimize decision-making processes and solve business challenges. **Python Programming:** Proficiently utilized Python for data manipulation, analysis, and model implementation. Demonstrated expertise in libraries such as Pandas, NumPy, Scikit-learn, PyTorch, and TensorFlow. **End-to-End Solution Development:** Successfully implemented end-to-end solutions using frameworks like Flask, ensuring seamless integration and deployment of data science applications. **Client Collaboration:** Effectively engaged with clients, comprehending unique requirements, and delivering tailored solutions that align with specific business objectives. **Project Management:** Successfully oversaw end-to-end project lifecycles, from scoping and planning to execution and delivery. Ensured timely and high-quality outcomes.

**CMAF Ecole Polytechnique** • Palaiseau • 04/2019 – 07/2019

#### Data scientist | DRL

- Collaborated with Professor Eric Moulines on pioneering research for "Visually Grounded Question Answering" (VGQA), implementing cutting-edge deep reinforcement learning algorithms. Focused on enhancing dialogue generation by synergizing visual information and natural language understanding, achieving coherent and contextually relevant responses to visually grounded queries.
- Contributed to academic discourse through valuable insights and methodologies, pushing the boundaries of knowledge at the intersection of deep learning, reinforcement learning, and natural language processing.

## EDUCATION

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### Master's degree (M2) in Data Science - Finance

Paris-Saclay University • GPA: Major • 09/2018 - 10/2020

- Completed rigorous AI coursework covering Reinforcement Learning, Deep Learning, and Computational Statistics.
- Applied advanced techniques in GANs for practical data applications.
- Demonstrated expertise in Scientific Python, R, and GPU computing for AI-driven solutions.

### Bachelor's degree in Applied Mathematics

Université d'Evry-Val d'Essonne • GPA: Major • 09/2017 - 09/2018

- Bachelor's in Applied Mathematics with proficiency in C, Python, and R programming.
- Specialized in advanced probability and statistics during academic pursuits.
- Acquired a strong foundation in mathematical principles and programming skills.

### CPGE - Preparatory class for high schools in Mathematics and Physics (MP)

Lycée Pierre De Fermat • GPA: honors (TB) • 08/2016

## SKILLS

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**Programming language :** C++, HTML, JavaScript, Python, R, SQL

**Tools and Frameworks:** AWS Sagemaker, Azure, Django, Docker, FastAPI, Flask, Heroku, Linux, PySpark, PyTorch, Streamlit, TensorFlow

**Advanced Modeling and MLOps:** Automating MLOps for Deep Learning, Designing Experiments, Implementing Advanced Statistical Modeling

**Knowledge Areas:** Algorithmic Trading, Causal Inference, Computer Vision, Deep Learning, Generative Adversarial Networks (GANs), Machine Learning, Natural Language Processing (NLP), Optimization, Reinforcement Learning, Statistics, Time Series Analysis

**Data-related Skills:** BeautifulSoup (BSoup), Data Scraping, Postman, PySpark, REST APIs, Scrapy

**Business Problem Solving:** Data Mining, Solving Business Problems through ML, Statistical Algorithms

**Large Data Sets and Distributed Computing:** Distributed Computing, Optimization, Proficient in Working with Large Data Sets, Simulation

**Languages:** French (Fluent), Proficient in English

## CERTIFICATIONS

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### Machine Learning pour le trading de A à Z

Data World • 06/2020

### Spécialisation Deep Learning

DeepLearning.AI • 01/2019

### Machine Learning

Stanford University • 06/2018 - Present