Ricardo Mokhtari

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Languages & Frameworks: **Proficient:** Python (PyTorch, pandas, numpy, matplotlib, sklearn, PIL), SQL, MATLAB/Simulink, Git, LaTeX
Familiar: TensorFlow/Keras, Java, C++, CSS, JavaScript, ReactJS

Technical Skills: **Regression** (Linear, Multiple Linear, Polynomial, SVR, Random Forest)**, Classification** (K-NN, SVM, Random Forest, Naïve Bayes, CNN), **Clustering** (K-Means, Hierarchical), **Deep Learning** (CNN, GAN), **Reinforcement Learning, Web Crawling, Cloud Computing**

Education

Imperial College London
Molecular Bioengineering (MEng)
2017 – 2021

- **Current grade: First (74% average)**
- **Active member of Advanced Data Science Team** – university-wide group of exceptional Data Scientists
- Relevant coursework:
  - **Mathematics** (Vector Calculus, Linear Algebra, Differential Equations)
  - **Probability & Statistics**
  - **Mathematical Modelling** (Stochastic Processes, Markov Models, Networks)
  - **Reinforcement Learning** (MC/TD methods, DQNs, Policy Gradients)

Charterhouse School
2012 – 2017

- **A-Level/Pre-U:** A* A* A A
- **GCSEs:** 11 A*s

Other Skills & Interests

Independent Learning – Udemy Courses

☑ Machine Learning A-Z for Data Science
☑ Complete SQL Bootcamp 2020

Hackathons

IC HealthHack '20 – Built an ML-enabled mental health companion app, awarded runner-up prize
IC Hack '20 – Built a web platform for children to learn Python by making games
IC HealthHack '19 – Built a wearable posture monitoring device to dynamically analyse posture and prevent spinal injury

Spoken Languages

English (Native)
Spanish (Advanced)
Portuguese (Basic)

Public Speaking

Given presentations on Deep Learning and AI safety to Audiences of 100+.

Work Experience

Advanced Data Science Team, Imperial College London
Data Scientist (part-time) | Web Crawling & NLP
November 2020 – Present

- Data Science research project in partnership with Refinitiv, Inc.
- Working in a team of 3 (scrum method) – creating an intelligent web crawler for extraction, processing and visualisation of company data
- Mentored closely by researcher at the Data Science Institute
- Working with Scrapy, NLTK and Reinforcement Learning frameworks

Biological Control Systems Lab, Imperial College London
Research Assistant | Deep Learning Research
June – November 2020

- Researched the use of Generative Adversarial Networks (GANs) as a data augmentation technique for improving a bespoke classifier for medical diagnostics
- Deployed the state of the art Pix2Pix model (TensorFlow), used multiple GPUs for training and improved model performance by 3%
- Developed complex data pipelines, used rigorous model evaluation frameworks

Projects

Data Science Project Portfolio
ricardomokhtari.github.io/Data-Science-Projects/
July 2020 – Present

- In my free time I analyse open-source data and share my analyses publicly on my website
- Projects include:
  - Predicting the quality of a film using a classifier – achieved >70% accuracy
  - Predicting US house prices using regression – achieved an RMSE of 0.13
  - Clustering mall shoppers based on their spending behaviour – identified 5 unique shopper groups

Data Augmentation Using Generative Models
Project Lead | Deep Learning Research
October 2019 – June 2020

- Led a team of 6 engineers – implemented the Variational Autoencoder (VAE) model to generate synthetic images
- Implemented Convolutional Neural Networks from scratch in PyTorch
- Organised and delivered technical presentations to audiences unfamiliar with our work
- Invited to extend project as a member of the research group

Algothon 2019 with BlackRock
Data Science Hackathon
November 2019

- Worked in a team of 4 – built an AlphaGen model based on social media analytics and stock price volatility
- Worked with proprietary real-world datasets – applied thorough pre-processing used sklearn and pandas, fitted a Random Forest Regression model
- Persevered to final day and presented insights to BlackRock's ML researchers

References may be supplied on request