Ricardo Mokhtari

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Languages & Frameworks: **Proficient:** Python (PyTorch, pandas, numpy, matplotlib, seaborn, sklearn, PIL), SQL, MATLAB/Simulink, Git, LaTeX
Familiar: TensorFlow/Keras, Java, C++, 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), **PCA, Reinforcement Learning, Web Scraping, Cloud Computing**

Education

Imperial College London
Molecular Bioengineering (MEng)
2017 – 2021

- **Current grade: First (74% average)**
- Relevant modules:
  - **Probability & Statistics** (Hypothesis Testing, Bayesian Statistics, t-test, ANOVA)
  - **Mathematical Modelling** (ODE models, Stochastic Processes, Markov Chains, Networks)
  - **Mathematics** (Vector Calculus, Linear Algebra, Differential Equations)
  - **Signal Processing**
  - **Reinforcement Learning**

Charterhouse School
2012 – 2017

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

Other Skills & Interests

Hackathons

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

Independent Learning – Udemy Courses

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

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)
November 2020 – Present

- Data Science research project in partnership with Refinitiv, Inc.
- Working in a team of 3 (scrum agile) – developing a data-driven method of automatically updating web crawlers for autonomous data extraction
- Mentored closely by research fellow at the Data Science Institute
- Technologies: scrapy, Abstract Syntax Trees, Reinforcement Learning

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
- Personally, handled anonymised patient data from a clinical trial
- Deployed the Pix2Pix model in TensorFlow, wrote extensive pre-processing code
- 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 – researched the use of generative models (VAEs) for improving a clinical image classification pipeline
- Implemented Convolutional Neural Networks from scratch in PyTorch
- Coordinated 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 and data cleaning techniques, applied random forest regression model
- Persevered to final day and presented insights to BlackRock's ML researchers

References may be supplied on request