Nawid Keshtmand

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I am a hardworking and determined individual, who strives to continuously move outside my comfort zone to grow. I aim to excel at any task I am given and can work effectively on my own, but I also understand the importance and thrive in a team. I am striving towards a career in research in using machine learning, specifically deep learning, to solve problems in society and make a significant difference to the lives of millions of people.

Qualifications

PhD:	**University of Bristol** Future Autonomous and Robotics Systems	**Sept '18 – Sept '22**
MSc:	**Imperial College London** First Class Honours, Advanced Mechanical Engineering	**Sept '17 – Sept '18**
BSc:	**Imperial College London** First Class Honours, Chemistry	**Sept '13 – Sept '16**
A – Levels:	**Preston Manor Sixth Form** A2: Biology (A*), Maths (A*), Chemistry (A*) AS: Biology (A), Maths (A), Chemistry (A), Physics (A)	**Sept '11 – July '13**

Technical Skills

- Proficient in Python and MATLAB programming languages.
- Proficient in machine learning and deep learning frameworks, including scikit – learn, PyTorch and PyTorch Lightning.
- Experienced user of Weights and Biases experiment tracking tools for managing machine learning experiments.
- Skilled user of Latex markup language for report writing.
- Proficient user of Vega – lite visualization tools.
- Experience with Git and GitHub processes for version control.

Topics & Projects

PhD Research Project **Oct '19 – Sept '22**

- Investigating the properties of contrastive learning, which makes it effective for outlier detection. This involves analysing different variants of contrastive learning and examining what is common in the representations in the data obtained from the different contrastive learning approaches.
- Developing novel approaches for outlier detection using the representations learnt from contrastive learning, which focus on using the properties of contrastive learning in conjunction with how typical data points are to be sampled from a generative model of the data.

First Year Robotics Research Project **Sept '18 – Sept '19**

- Trained agents in a competitive predator – prey setting in a discrete grid world using Deep Q – learning, as well as policy gradient approaches to understand the behaviour of an online adaptive multi-agent system.

- Analysed the behaviour of the predator and prey by building decision trees, using the states and actions of the different agents and found that both the prey and predator agents were behaving in an intuitive manner but were cycling through the same behaviours during the adaption process.

Machine Learning **Sept '18 – Jan '19**

- Obtained a strong foundation in Bayesian statistics by completing various coding assignments related to Bayesian interpretation of machine learning algorithms such as classification and regression tasks.

MSc Mechanical Engineering Research Project **Oct '17 – Sept '18**

- Developed a motion and muscle contraction sensing human – machine interface, to control drone motion and action.
- Examined MATLAB and C# algorithms for the classification of muscle contractions from mechanomyography signals and implemented linear discrimination analysis, support vector machine, and convolutional neural network classifiers into an existing human – machine interface.

Employment History

Adarga AI: Data Scientist/Machine Learning Engineer Intern **Jun '22 – Aug '22**

- Working on projects which combines implementing large language models and knowledge graph technology to perform various natural language tasks such as sentiment analysis.

Imperial College London: Telephone Fundraiser **June '16 – July '16**

- Represented the University in a friendly and professional manner by interacting with alumni from a range of different backgrounds, discussing career paths available to graduates and advising alumni on how they can benefit from being an Imperial alumnus.
- Successfully persuaded alumni to make donations to the University, with some alumni donating £100+.

KPMG: Audit intern **June '15 – July '15**

- Gained an understanding of the inner working of various businesses, by working directly with KPMG clients, examining financial data and preparing presentations.

Additional Information

- Attended the DeepLearn 2019 Summer School and learnt about areas of research in Deep Learning, such as Deep Generative models and adversarial examples.
- Graduated in the top 5 of my class for my BSc and included in the Imperial College Chemistry Dean's list.
- STEM Ambassador and regularly participate in outreach activities, such as teaching children how to build basic robots.
- Active listener of Machine Learning podcasts, such as Robot Brain, TalkRL and Machine Learning Street Talk.
- Active individual focused on health and wellness. Listener of Health and Wellness podcasts, including, Huberman Lab and Diet Doctor. Also, regular gym goer and part of the postgraduate indoor football team.
- English (native) and Persian (fluent).