Leo **Muckley**

Data Scientist | Researcher

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Social Network

leomuckley
leo-muckley
leomuckley

Technical Skills

- Proficient: **Python**, **TensorFlow**
- Familiar: **R**, **SQL**, **C++**
- Used: **Spark**, **PyTorch**, **D3.js**
- Experienced in Git, Jira, LaTeX, Linux and Google Cloud Platform

Soft Skills

• **Communication skills**:
Presented research findings to audiences of varied technical expertise

• **Strong work ethic**:
Demonstrated effective time management while working under pressure

• **Teamwork skills**:
Experienced at working in collaborative environments and practised in exchanging ideas

Interests

- Kaggle
- Machine Learning Meetups
- Hiking
- Photography

Education

University of Edinburgh

- **MSc Data Science** 2018 – Present
  Coursework: Machine Learning & Pattern Recognition, Probabilistic Modelling & Reasoning, Data Visualisation, Automatic Speech Recognition, Statistical Methodology, Fundamentals of Optimization, Data Mining & Exploration

University College Cork

- **BA Economics & Mathematical Studies** 2015 – 2018
  Result: **First Class Honours**
  Coursework: Computational Data Analytics, Differential Equations and Dynamical Systems, Econometrics, Linear Predictive Modelling, Game Theory, Linear Algebra, Discrete Mathematics, Fundamentals of Internet Computing
  Awards: Title of College Scholar (2016, 2017, 2018)

Working Experience

Eaton Centre for Intelligent Power

Data Scientist Jan 2020 - Present
• Contributed expertise in **AI research** and **applied data science** to projects within the Eaton AI team
• Collaboratively developed a portfolio of **deep learning** techniques to accurately categorise supply-chain transactions
• Ensured the best **software development** practises using object oriented programming principles for readable and reusable Python code
• Worked in an **agile environment** and regularly communicated project findings to business stakeholders
• Experienced at participating to all steps of a engineering project life-cycle, from initial feasibility study to **productization**
• **Patents** approved for application in the area of **rule-based classification**, **active learning** and **multi-agent systems**

Adapt Centre, Trinity College Dublin

AI Research Intern May 2018 – August 2018
• Assisted the team in the training and testing of a model to produce a **neural network dialogue agent**
• Created an annotation scheme to be used for the identification and annotation of topic in future corpora
• Determined statistically significant relationship between utterance duration and topicality of conversation in research

Projects

- Devised a **novel** solution for accurately predicting flood extent in Mozambique by utilising multi-spectral satellite images into a **multi-input ConvLSTM** to effectively model the spatio-temporal nature of flooding
- Trained a **deep reinforcement learning** model for agents to learn to play football in the Google Research Football Environment using **Deep Q-Learning** algorithm
- Developed an **ordinal regression** technique to successfully predict childhood learning outcomes by utilising data from a game-based learning tool in early childhood education
  (Data Science Bowl competition 2019: Top 7% Finish)
- Created a **Python package** for approximating mutual information based on **maximum likelihood estimation** approach
- Utilised Kaldi toolkit to build hybrid Hidden Markov Model/Neural Network based **automatic speech recognition** systems for word recognition tasks