Leo **Muckley**

Data Scientist | Researcher

- Cork, Ireland
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Social Network —

- leomuckley
- leo-muckley

Technical Skills —

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

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 – 2020
  Result: **Merit**
  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)

Experience

Eaton | Centre for Intelligent Power

Data Scientist   Jan 2020 - Present
- Contributed expertise in **data science** and machine learning **research** to projects within Eaton's *Centre for Intelligent Power*
- Collaboratively developed a portfolio of **deep learning** techniques to accurately categorise supply-chain transactions resulting in significant cost savings for the company
- Worked in an **agile environment** and regularly communicated project findings to business stakeholders
- Ensured the best **software development** practises using object oriented programming principles for readable and reusable Python code
- Exposed to all steps of the data science project life-cycle, from initial feasibility study to **productization**
- Experienced in writing **patents** with applications in the areas 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

- Submitted and presented my MSc thesis at the *25th International Conference on Pattern Recognition*, which comprised of a **novel** solution for accurately predicting flood extent, namely a **Multi-Input ConvLSTM**
  [**Project Link**] (MSc thesis; ICPR 2020)

- Developed an **ordinal regression** technique to successfully predict childhood learning outcomes by utilising data from a game-based learning tool in early childhood education
  [**Project Link**] (Data Science Bowl competition 2019: Top 7% Finish)

- Adopted transfer learning, via an **EfficientNet** model, to correctly classify leaf disease in Cassava plants with accuracy of 88.5%
  [**Project Link**] (Kaggle competition: *currently in progress*)

- Utilised Kaldi toolkit to build hybrid Hidden Markov Model/Neural Network based **automatic speech recognition** systems for word recognition tasks