# **Eoin Mc Allister**

## Software Engineer / Machine Learning Engineer

Machine Learning Engineer skilled in Deep Reinforcement Learning with 2 years of experience creating machine learning models. Respectful self-motivator gifted at finding reliable solutions for software issues. Enthusiastic team player ready to contribute to company success.

### **Projects**

- Research / Thesis Designed a Deep Reinforcement Learning algorithm that utilized Distributed Learning, Evolution Strategies and Off Policy Deep Q Learning to improve on Exploration efficiency, Exploitation efficiency, decrease catastrophic forgetting and handle environments with sparse / irregular rewards. Built on PyTorch
- Natural Language Processing Sequence 2
   Sequence Neural Machine Translation model with attention. A transformer model that translated English Sentences to French. Built on Keras / Tensorflow
- Deep Learning Project Designed a Convolutional Neural Network from scratch (From maths without the use of frameworks such as TF or PyTorch)
- Machine Learning Projects Includes regression, Support Vector Machine versus K Nearest Neighbours, Multinomial Logistic Regression from scratch versus Scikit Learn / Sklearn Logistic regression model
- Reinforcement Learning project Designed a basic grid environment to replicate the Frozen lake game and trained a Q Learning agent to traverse the environment towards a goal

### **Work History**

### 2019-03 -2019-09

## Software Engineer

Airtel-ATN, Dublin

- Direct software programming using <u>Python</u> and development of products documentation.
- Coordinate installation of software system on <u>Linux</u> OS servers.

#### Contact

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#### LinkedIn

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#### **WWW**

https://github.com /eoin-james

#### **Skills**

Machine Learning

Data Structures and Algorithms

Deep Learning

Python

Data Science

Communication

Leadership

Team player

Reinforcement Learning

Natural Language Processing • Train users to use new or modified equipment.

 Modify existing software to correct errors, to adapt it to new hardware, or to upgrade interfaces and improve performance requirements.

 Collaborated effectively with members of software development team and personnel in other departments.

## 2021-11 - Deep Learning Hardware Engineer 2022-05

Intel, Dublin

- Direct Verilog programming
- Worked in Linux environments
- Experience using both GitHub and GitLab

### Education

## 2020-08 - Master of Science: Computer Science

National University of Ireland Galway - Ireland Computer Science masters specialised in Artificial Intelligence topics.

- Research thesis on 'Improving exploration efficiency and diversity in Off-Policy Deep Reinforcement Learning Algorithms through Evolution Strategies and Novelty Search' in which my work has received a first class honors
- Covered modules such as Machine Learning, Deep Learning, Reinforcement Learning, Natural Language Processing (NLP), Advanced NLP, Agents and Multi Agents, Data Visualisation, Embedded Image Processing (CV), Optimisation and Ethics.
- Experience in building Neural Networks using frameworks such as TensorFlow and PyTorch
- Experience building Machine Learning models using frameworks such as Scikit-learn

## 2016-09 - Bachelor of Science: Computer Engineering

Technological University Ireland - Ireland

Tensorflow / Keras

**PyTorch** 

SKlearn