

JAKE COWTON

Senior ML Engineer

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ABOUT

I am an experienced Machine Learning Engineer coming from a background in software development. My core expertise is in dealing with the full-stack required for machine learning, including data pipelines, model training and managing scalable deployments. I specialise in Computer Vision and Natural Language Processing, though my interests also lie in automation, DevOps & MLOps, and privacy-preserving AI.

EDUCATION

PhD in Deep Learning

Newcastle University

2016 - 2020

- Multi-Sensor, Time Series Anomaly Detection
- Multi-Object Tracking and Object Re-Identification

BSc in Computer Science

Northumbria University

2011 - 2015

SKILLS

Machine Learning Computer Vision
NLP Python GitOps CI/CD AWS
DevOps K8s/Nomad Google Cloud
PyTorch HuggingFace DVC
Weights & Biases Scikit-learn Scrapy
Matplotlib Pandas Numpy

KEY PUBLICATIONS

Automated Individual Pig Localisation, Tracking and Behaviour Metric Extraction Using Deep Learning, J. Cowton, I. Kyriazakis, J. Bacardit, IEEE Access, 2019

A Combined Deep Learning GRU-Autoencoder For The Early Detection Of Respiratory Disease In Pigs Using Multiple Environmental Sensors J. Cowton, I. Kyriazakis, T. Plötz, J. Bacardit Sensors, 2018

Open Data And Data Analysis Preservation Services For LHC Experiments, J. Cowton, et al., Institute of Physics, 2015

EXPERIENCE

Lead ML & Data Engineer

Welcome AI Travel

Mar 2020 - Present

Remote, USA

- Lead design, development & deployment of the data ingestion pipelines; including data management, model training & optimisation, turning models in to APIs, scalable deployments
- Trained a domain-specific language model using unlabelled data, to use in place of GPT, to get better results for our use case
- Utilised a combination of web scraping deployed to Nomad and custom Computer Vision & NLP models deployed to Kubernetes to extract data from articles and videos using various transformer architectures
- Managed a team that worked on our data collection capabilities
- Maintained all the necessary infrastructure for data collection and model training & deployment with a GitOps
- Developed a generic article parser to extract PoI data (name, address, hours, type of place etc.) from any article using machine learning
- Contributed to overall planning and direction, produced data & talking points for investor updates, and coordinated projects with other teams

Senior Research Associate

Northumbria University

Feb 2020 - March 2020

Newcastle, UK

- Short project to develop a method for cancer detection using deep learning that required only a smartphone
- Project used object localisation, segmentation & classification

Co-Founder & CSO

Fair Custodian

Oct 2018 - Feb 2020

Newcastle, UK

- Implemented a highly-scalable pipeline to extract key information from user emails using NLP to be presented in a concise format
- Involved with business planning, fundraising strategy and leading research & implementation of our core intellectual property
- Developed the company through several accelerator programs

Co-Founder

Research Analytics

Oct 2017 - Feb 2020

Newcastle, UK

Research Engineer

Newcastle University

Oct 2015 - Jan 2016

Newcastle, UK

Software Developer

CloudTrade

Jul 2015 - Oct 2015

Newcastle, UK

Software Developer

CERN

Jun 2013 - Aug 2014

Genva, Switzerland