Dom McKean Data Science/Robotics Engineer

Email: dommckean@gmail.com | Mobile: 07961345205 | Location: Midlands UK – Open to relocate

Website: dommckean.github.io |LinkedIn: linkedin.com/in/dom-mckean

Skills:

Data Science, Analytics, Statistics, Visualisation, Python, Pandas, Numpy, Scikit-Learn, Machine Learning, Deep Learning, PyTorch, SQL, GCP, Robotics, ROS, Vision, OpenCV, Control Systems, Matlab/Simulink, Google Data Studio, Management, Research, Linux, MS Office

Summary:

Having a broad background in engineering, control systems and data science means I have much larger solution space than your typical data engineer. I like to examine problems analytically, dive deep into complex systems and discover the fundamental relationships governing data while uncovering hidden biases to quickly automate practical robust solutions.

Experience:

Data Science/Robotics Engineer

Intelligent Automation - Loughborough University | 2017 - Present

- Tasks include-
- **Data Analysis:** Collect, clean and shape data. Feature selection, modelling and visualisation.
- **Data Science:** Implement machine learning methods: regression, classification, Naive-Bayse, neural networks - CNN, time-series –RNN, LSTM, reinforcement learning.
- **Data Engineering:** Implement data warehousing using DBMS, SQL, BigQuery, Hadoop, Google Cloud Platform (GCP), Flask.
- Used real world robotics data to develop analytical and ML predictive models of complex contact dynamics for robotic control.
- Developed a novel LSTM network capable of predicting robotic manipulation force for constrained flexible objects.
- Carried out forensic analysis of data and data collection methods for discovering hidden bias and assumptions.
- Developed various robot controllers and path planners using a variety of control methods.

Research Engineering Technician

Engines & Powertrains Research Lab - Loughborough University | 2013 – 2017

- Took ownership of several research test cells and was responsible for all mechanical, electrical, control systems and data analysis work.
- Developed predictive models for engine performance, durability, economy, environmental impact.

- Designed instrumentation, data acquisition and control systems for OEM research engine projects.
- Saved several £k by developing a variety of bespoke mechanical, electrical and software-based systems for research projects, subsequently receiving a large bonus.

Senior Engineer/Engineering Manager

Linde Materials Handling | 2010 - 2013

- Managed large customer site as a resident engineer responsible for all materials handling machines, external contractors and apprentice engineers.
- Reduced equipment downtime by using data to prioritise tasks and develop new logistical algorithms for planned and reactive maintenance.
- Increased warehouse productivity and reduced accidents by analysing working procedures to affect positive change.
- Secured new contracts worth tens of £k receiving substantial pay rise and promotion.

Education:

- PhD Machine Learning and Robotics | 2017- 2021 (Currently writing up)
- BSc Electrical and Electronics Engineering, 2:1 | 2014 – 2017
- HNC Electrical and Electronics Engineering, Merit | 2012 - 2014

Certificates:

- Data Science Math Skills | Coursera | Nov 2020
- GCP - How Google Does Machine Learning | Coursera | Oct 2020
- Learning GO | LinkedIn | Aug 2020
- Advanced Predictive Modelling: Mastering Ensembles and Metamodeling | LinkedIn | Aug 2020
- Amazon Web Services Machine Learning Essential Training | LinkedIn | Aug 2020
- Python Statistics Essential Training | LinkedIn | Aug 2020
- Version Control with Git | LinkedIn |Jul 2020
- PyTorch Essential Training: Deep Learning | LinkedIn | Jul 2020
- Data Science & Analytics | LinkedIn | Mar 2020
- Python3 | SoloLearn | Nov 2019
- SQL Fundamentals | SoloLearn | Jul 2019