

## Contact

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## Technical Skills

### Languages

- Python
- Bash
- SQL
- R

### Python Packages

- Pandas
- Numpy
- OpenCV
- Sci-Kit
- TensorFlow
- Keras
- Flask
- Pytest
- Streamlit

### Technologies

- Docker
- Docker Compose
- PostgreSQL
- SQLServer
- Git
- PowerBI
- Linux
- Ubuntu
- CentOS

## Education

### Msc, Data Science - Distinction

09/19 - 09/20

Liverpool John Moores University

### Bsc, Physics - 2:2

09/16 - 09/19

University of Southampton

## Summary

I am a UK based Data Wrangler. I have extensive experience designing, writing, and implementing end-to-end data pipelines that contain custom deep learning algorithms. I enjoy the challenge of writing production ready code to implement tools and services that help others complete their work

## Experience

### Data Wrangler | University Hospital Birmingham | 02/2021 - Present

#### HIGHLIGHTED PROJECT: End-to-End Design and Development of Data Pipeline

- 15Tb of images to; scrape and strip metadata, remove identifiable images and change format to DICOM
- Designed and implemented data pipeline that was required to be built around software from external company to convert images into dicoms.
- Trained, tested, and incorporated two CNNs in pipeline. 99.8% accuracy for removing 'identifiable' images and 98.8% accuracy for feature extraction to fill NULL values in structured data in PostgreSQL.
- Each stage of pipeline was an isolated docker container, if a container would run was controlled by logic in a PostgreSQL table

#### Building Custom Tools

- Built automated tools for Data Developers to be able to easily access resources that required manual intervention beforehand.

#### Reverse engineering

- Reverse engineered a proprietary file type and scraped files for IDs that linked back to an existing database which allows us to link across different data sources which were inaccessible before.

#### Infrastructure Management

- Built and manage Postgres databases and Ubuntu application servers. Independently incorporated uptime monitoring of on-prem servers, with automated notifications that were pushed through to a Teams channel with other members of the infrastructure team.

#### Team Practices

- Pushed for sharing code between teams in GitHub to reduce repeated work, pushed to implement coding standards such as unit testing, standardised logging, and error handling for all production code.

#### Freelance Work | OCR Data Extraction for Academic Paper

- Tasked with extracting data from scanned PDFs. PDF files required thorough cleaning and OCR required complex logic. Paper "Is point wise analysis of the Humphrey visual field feasible as a primary outcome in idiopathic intracranial hypertension?" currently in the process of being published in TVST.

#### Personal Projects | Controlling Drone using Webcam

- Using OpenCV, a TensorFlow CNN was combined with a Decision Tree and were trained to identify the positions of my hands, this was then used instead of the controller to pilot the drone.