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Jamie McQuire

Experience

Expedia Group — London, United Kingdom
Data Scientist — October 2023 - October 2024

- Developed scalable machine learning algorithms for pricing optimization, significantly improving business KPIs for the Revenue Optimization and Data Science team.
- Developed an XGBoost pricing algorithm that increased property profits by 5.4%, conversion by 7.8%, and nights booked by 7.6%.
- Collaborated cross-functionally to integrate machine learning tools into production environments, enhancing both internal and customer-facing systems.

Expedia Group — London, United Kingdom
Data Scientist Internship — July 2022 - September 2022

- Developed recommendation systems for high-value property suggestions for travel agencies in the Chinese market.
- Created a workflow to update stakeholders with personalized property recommendations for travel agencies.

Education

Newcastle University — Newcastle-upon-Tyne, United Kingdom
Ph.D. in Computer Science — September 2019 - June 2024

- Thesis: **Transformers for Parkinson's Disease Gait Analysis in both Centralized and Decentralized Machine Learning Environments.**
- Successfully defended June 2024

Durham University — Durham, United Kingdom
M.Eng in General Engineering — October 2015 - July 2019

- GPA: 4.0
- Specialization: Electronic Engineering.
- Masters thesis: **Detecting the Pilot Spoofing Attack in Massive MIMO with Machine Learning.**

Skills

Programming Languages: Python, SQL, C++, C, Scala, R, Matlab.

Machine Learning/Data Analysis: PyTorch, TensorFlow, Scikit-learn, XGBoost, ONNX, Apache Spark, PySpark.

DevOps: Docker, Kubernetes, Airflow, CI/CD Pipelines, Git.

Data Visualization: Microsoft Power BI, Tableau, Seaborn, Matplotlib.

Cloud Computing: Microsoft Azure, AWS, Databricks.

AI/ML Systems: Pricing Optimization, Recommendation Systems. Federated Learning, Transformers, Time Series Analysis, Computer Vision.

Project Management: Jira, Confluence, Miro, Microsoft Office 365.

Languages: English (Native).

Publications

1. **McQuire, J.**, Watson, P., Wright, N., Hiden, H. and Catt, M., 2021, December. Uneven and Irregular Surface Condition Prediction from Human Walking Data using both Centralized and Decentralized Machine Learning Approaches. In 2021 IEEE International Conference on Bioinformatics and Biomedicine (BIBM) (pp. 1449-1452). IEEE.

2. **McQuire, J.**, Watson, P., Wright, N., Hiden, H. and Catt, M., 2023, July. A Data Efficient Vision Transformer for Robust Human Activity Recognition from the Spectrograms of Wearable Sensor Data. In 2023 IEEE Statistical Signal Processing Workshop (SSP) (pp. 364-368). IEEE.

3. **ACCEPTED: McQuire, J.**, Watson, P., Wright, N., Hiden, H. and Catt, M., 2024, December. Data Efficient Transformers for Wearable Sensor Analysis in Centralized and Federated Environments. In 2024 IEEE International Conference on Big Data (BigData). IEEE.