BRANDON LEE

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PERSONAL PROFILE

Analytical, challenge seeking, a talent for problem solving. An accomplished consultant Data Scientist with a cloud specialisation in AWS who consistently delivers results within demanding time and cost restraints.

Confident in devising creative solutions to complex data science problems, leading projects to achieve excellence, and presenting results to non-technical stakeholders.

Experienced in all stages of the data science life cycle, from gathering business requirements and understanding the problem to creating production-level machine learning pipelines.

EXPERIENCE

Consultant Data Scientist

Inawisdom

February 2020 – Present London, UK

- Worked in a variety of industry domains to provide data-driven insights through proof-of-concepts and production-level applications.
- Developed machine learning models to solve a diverse range of problems, ranging from ETA prediction and brake replacement likelihood to instance segmentation of trees on bird-eye view images of farms and PPE gear detection.
- Held weekly meetings with stakeholders to update project progress, risks and issues, and to gather any additional data requirements.
- Productionised machine learning pipelines to perform automatic training, deployment, and inference using AWS SageMaker, AWS ECR & ECS, and AWS Step Functions.
- Presented playback presentations to stakeholders at the end of projects to summarise the problem solved, data used, approach of solution, and the final results.
- Revised the Discovery-as-a-Service offering provided by Inawisdom to clarify the processes, resources, and responsibilities involved. Held a company-wide presentation to inform departments about the revised offering.
- Actively contributed to the development of the Data Science practice by creating standards and reusable assets to accelerate project development, and presenting Lunch & Learns to the team on ML-aspects of projects.
- Lead teams to develop demos to show to prospective clients by solving problems on dummy data and presenting results on interactive dashboards using AWS QuickSight.
- Provided time and cost estimates of prospective pre-sales opportunities.

SOFTSKILLS

Continuous Learning | Communication | Storytelling | Problem Solving | Critical Thinking | Adaptability | Curiosity | Responsibility | Agile | Scrum

TECHNICAL SKILLS

Python	●●●●●
Data Visualisation	●●●●●
Machine Learning	●●●●○
AWS (for ML)	●●●●○
Git	●●●○○
Docker	●●●○○

STRENGTHS

- Python

Pandas | PySpark | Numpy | Scikit-learn | LightGBM | Optuna | FLAML | PyTorch | Keras | Matplotlib | Seaborn

- AWS

SageMaker | ECR | Lambda | Step Functions | EventBridge | CloudWatch | SNS | S3 | DynamoDB | Redshift | CodeCommit

CERTIFICATES

AWS Certified Machine Learning - Specialty

Amazon Web Services (AWS)

Aug 2021 – Aug 2024

AWS Certified Cloud Practitioner

Amazon Web Services (AWS)

Oct 2020 – Oct 2023

PROJECTS

Freight ETA Predictions to Vehicle Dealerships

Inawisdom

October 2021 – Present London, UK

- Worked with a multinational automotive manufacturer to improve freight ETAs from distribution centres to dealerships.
- Lead daily working sessions with technical team members to clarify tasks and solve issues.
- Broke down the problem of predicting ETAs for entire journeys into sub-problems of predicting ETAs for legs of journeys with a model being developed for each sub-problem.
- Developed an inference script to combine the predictions of models and obtain an ETA for a journey.
- Productionised the training and inference scripts into a Docker container which is used to execute SageMaker training jobs and create SageMaker Model Endpoints for inference.
- Orchestrated the data preprocessing and inference pipeline using Databricks and Apache Airflow.
- Held discussions with operational SMEs and truck and rail carriers to identify additional factors that impact ETAs and engineer these from datasets to include in models.
- The developed solution improves on-day accuracy by 48%, and ±1 day accuracy by 28% relative to current solution.

Personal Protective Equipment Detection on Edge Device

Inawisdom

March 2020 – April 2020 London, UK

- Worked with Balfour Beatty and ADLINK create a machine learning solution that promotes a safer environment for construction workers.
- Acted as the data science lead for the project, making executive decisions on the methodology and direction of the project.
- Collected data first-hand by capturing images of people wearing PPE gear (helmet and high-vis vest) provided by Balfour Beatty which were then hand-labelled and subsequently augmented to obtain additional data.
- Trained a convolutional neural network to detect the bounding box of PPE gear by performing transfer learning on MobileNetV2 pre-trained on ImageNet.
- Optimised and deployed the model using OpenVINO to an ADLINK camera designed to run deep learning models.
- Presented the methodology, use case, and a live demo of PPE being detected using the camera to multiple audiences, internal and external.
- Case study link: Construction Site of the Future

EDUCATION

MSc in Data Science, Distinction

University of Bath, Department of Computer Science

Sept 2018 – July 2019

Dissertation title: Learning to learn to remove image vignetting

- Aim of the dissertation is two parts, first is to remove image vignetting using machine learning methods.
- Vignetting is the reduction of an image's brightness towards the periphery compared to the image centre.
- Artificial vignetting was applied on an image dataset to obtain train, validation, and test data.
- A convolutional neural network utilising skip connections, CoordConv operations, and pixel-to-pixel networks was created to solve the problem of removing image vignetting.
- Second aim was to utilise a meta-learning technique to create an optimiser which was specifically designed to optimise the base learner (network produced in the first aim).
- This optimiser was created using an LSTM network as it mimics the coordinate-wise update rule of optimisation algorithms.

BSc in Economics, First Class Honours

University of Surrey, School of Economics

Sept 2014 – June 2018

HOBBIES

- Physical fitness - 5 years of weight training, mentored many close friends and family members who have expressed interest in improving physical health.
- Data analytics - Built a webscraping pipeline on AWS utilising lambda and step functions to obtain price data of products from supermarkets on a daily basis which is then visualised on a PowerBI dashboard.
- Automation - Built an automated pipeline on AWS utilising lambda and step functions that purchases crytocurrency on a monthly basis with effectively zero running costs.