

William Harris

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Machine Learning Engineer

Enthusiastic and well-rounded ML engineer with 4 years' experience, looking to pursue interest in machine learning development, product deployment and MLOps areas.

WORK EXPERIENCE

Machine Learning Engineer, Poplar Studio, London

Apr 2021 — Present

- Led ML and product R&D at a start-up providing AR software for e-commerce.
- Responsible for project managing, prioritising, gathering feedback and pitching to the senior leadership team on a regular basis.
- Developed deep learning solution to measure any object to 5mm accuracy with a single RGB photo using a credit card as reference, creating new business with a watch and bracelet virtual sizing tool.
- Implemented code-quality assurance, automated testing, experiment tracking and artifact management with Weights and Biases, improving reliability and accelerating development time.
- Led end-to-end development of a web-based 3D ring and watch try-on experience using an off-the-shelf keypoint tracking model, opening up new lines of business for the company.
- Trained image segmentation model to enable automatic AR jewellery try-ons from client's existing product images. Developed solution to shape the processed images in 3D space, providing an alternative to 3D modelling, reducing cost from \$200-\$1000 per item to almost zero.
- Created pipelines to generate synthetic training images for a variety of projects, producing high quality data for low cost.

Data Scientist, FTI Consulting, London

Jul — Aug 2019 (Intern), Nov 2019 — Apr 2021

- Responsible for modelling and data engineering on client projects in document classification, social networks analysis and computer vision.
- Utilised LLMs (BERT) to train NLP models matching human-level performance; led to £100k client engagement. Organised effort to label 7,000 examples across team in 2 days.
- Developed internal library for rapid data preparation and NLP model training. Implemented practices and techniques such as cyclical learning rates, learning rate finder, back translation, class weights (TensorFlow), resulting in higher accuracy in less training time.
- Used CNNs to develop object detection and face recognition to search 10,000s of images for relevance.
- Automated data pipelines in Airflow; deployed ML models to production with Docker. Saved 3+ hours per day of manual work.
- Designed database architecture and scalable backend solution of web application providing social media statistics and AI services (Python/Flask, Celery).

EDUCATION

Wadham College, University of Oxford

Oct 2015 — Jun 2019

- MMath Mathematics: upper second class.
- Coursework: probability, statistics, machine learning, data science, network science.

TECHNICAL SKILLS

- **Data science tools:** Standard Python stack (NumPy, pandas, Matplotlib, scikit-learn). XGBoost/LightGBM. SQL. Deep learning frameworks with a preference for PyTorch.
- **Developer tools:** Git, Docker, Amazon Web Services, JupyterLab/JupyterHub.
- **Other libraries:** Flask, FastAPI, Gradio, Plotly Dash, MediaPipe, Locust.

EXTRA-CURRICULAR ACTIVITIES

- **Oxford Nightline:** provided confidential listening support to university members. Maintained organisation's public-facing and internal websites.
- **The Ashcombe School:** Mentored children 1:1 with reading, spelling and numeracy difficulties.
- Hobbies include rock climbing, hiking & travel, and Japanese culture and language.