**IPEK SAHBAZOGLU** ipeksahbazoglu@gmail.com <https://ipeksahbazoglu.github.io/portfolio/> +4407470720755

**EDUCATION**UNIVERSITY OF OXFORD—Magdalen College; *2019-2023*

MEng*,**Engineering Science, 2:1* **–** Coursework: Statistics, Probability, Systems and Perturbation Methods, Machine Vision, Regression, Neural Networks, Machine Learning, Cloud Computing and Accelerators, Computer Architecture/ Networks, Technology Strategy, Software Engineering, Control Systems, Optimisation.AMERICAN ROBERT COLLEGE **–** *High School Diploma,* 91% Average; SAT: 1520  *2014-2019*

**SKILLS**Python, Java, C++, R, SQL, AWS, RedShift, ETL, sk-learn, seaborn, numpy, pandas, boto3, Pytorch, TensorFlow, Tableau, Data Cleaning/Manipulation, Microsoft Office, Git, MATLAB, CAD, Solidworks; Turkish, English  **EXPERIENCE   
AMAZON**, AMZL(Amazon Logistics) Last Mile Trust & Safety London, UK*Business Analyst Intern* Jun-Oct 2022  
∙ Pre-processed, analysed and joined data from large/complex data warehouses to perform exploratory data analysis, feature selection for temporal trend identification. Developed a forecast model from scratch that combines piecewise regression and time-series forecasting analysis. Increased forecast accuracy by 80%.  
∙ Automated the data pre-processing, data analysis and the developed model using Python (boto3), SQL, AWS S3, and running ETL jobs. Reduced the logistics report generation time by 50%. Presented results to key stakeholders.  
∙ Collaborated with cross-functional stakeholders to ensure engagement, execution speed, and high-quality outcomes.  
∙ Answered to data requests from various teams, including visualisations, data cleaning and fuzzy string matching.   
∙ Handled multiple priorities in a constantly changing environment and pivoted as the business required.

**ATLAS OF FINANCE**, Yale University Press/School of Geography and the EnvironmentOxford, UK*Technology and Development Intern* September 2021  
∙ Extracted, interpreted and analysed macroeconomic data using R, SQL and Excel from a large dataset.  
 ∙Identified growth patterns in the Financial/Business Services and visualised the key growth metrics with Tableau.  
∙ Processed raw data and manipulated it to inter-industrial transaction matrices to construct Input-Output tables.  
∙ Wrote a script that calculates the network statistics, Leontief/Ghoshian Inverse and backward/forward linkages with 40% improved time efficiency compiled my findings in lists and spreadsheets to develop a financial report.

**DEPARTMENT OF ENGINEERING SCIENCE,** University of OxfordOxford, UK

*Research Intern*  Jun-Aug 2021

∙Built a data processing pipeline using Python, MATLAB and Jupyter Notebook, taking in raw audio data and performing Fast Fourier Transforms analysing its frequency content and visualisations through spectrograms.

∙Presented the report of my data-driven findings and further research areas as a part of a larger sonification project with Oxford’s Faculty of Music, the History of Science Museum, and MIT’s Grammy Award-Winning Evan Ziporyn.

**JAGUAR LAND ROVER** Oxford, UK

*Project Intern/Mentee* Jun-Oct 2020

∙Developed and deployed a Deep Reinforcement Learning Model using a Deep Deterministic Policy Gradient Agent that computes an optimal trajectory for a mobile object with LiDAR sensors in an environment using MATLAB.

∙Performed root-cause analysis to achieve a robust and optimised design that maximises long-term reward, achieving a 20% improvement in the time before failure. Implemented control systems to optimise/expand the model. **PROJECTS**

**GEOMETRIC DEEP LEARNING:** Theory and Applications On Social MediaOct-June 2022

∙Research and implement Graph Neural Network (GNN) architectures (Graph Convolutional and Attention Networks)

∙Explore applications on predictive social media analysis, identify limitations and improve current methodologies.

**PATH-PLANNING FOR MULTI-DRONE SYSTEMS**  Oct-June 2021

Designed and simulated an autonomous-flight path planning framework for surveying of an area, minimising time and resource efficiency. Implemented with MATLAB - Optimisation Toolbox and solved with GUROBI optimiser