

Kshitij Kapoor

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EDUCATION

University College London

London, UK

MEng. Integrated Masters in Mechanical Engineering, Minor in Computer Science

Sep. 2020 – Oct 2024

- **Relevant Courses:** Data Structures and Algorithms, Operating Systems, Web App Development, Data Science, Databases, Distributed Systems, Stochastic Calculus.

St Dominic's Sixth Form College

Harrow, UK

A Levels: Maths A, Further Maths A*, Physics A*, Chemistry A*

Jul 2018 – Jun 2020

- **Achievements:** British Maths Olympiad (BMO) '20, BPhO'20.

EXPERIENCE

Thought Machine

Jul 2023 – Sep 2023

Backend Engineering Intern

London, UK

- Worked at a fast-paced **Unicorn Fintech**, improving a core banking process in Accounts by making a tracking feature in Microservice backend and streaming to a frontend, providing visibility to **11 Million** Customers.
- Took ownership of **design decisions** and successfully integrated a Partially Cached Database into the Accounts Microservice, improving execution time by **60%**.
- **Integration**, and **end-to-end tested** programmatically and by streaming to a web app to display the the health status of the Accounts Migration process, a feature requested by **2 Tier-1** banks.
- Delivered and showcased the project to the **CEO**, meeting project expectations but also achieving **two stretch goals** that extended feature coverage by **over 50%**.
- Technologies used: Golang, Python, Kafka, Kubernetes, PostgreSQL, Linux

HCL Technologies

Jun. 2021 – Aug. 2021

Software Engineering Intern

London, UK

- Audited website using tools such as Semrush to identify and resolve errors, outdated content, links, resulting in a **15%** increase in **Customer Satisfaction** scores based on **feedback**.
- Optimised **content delivery** using image compression, lazy loading and browser **caching**, leading to a **12%** decrease in **loading time**.
- Technologies used: JavaScript, Bootstrap, Tailwind CSS, HTML, Figma, Semrush

PROJECTS

UK House Price Predictor | *Python, Flask, SQLAlchemy, Scikit-Learn, Selenium, Git, CI/CD*

- Acquired dataset from government sources, cleaned and conducted **feature analysis**.
- Classified house types, **predicted future prices** using a neural network.
- Visualized interactive plots in a web app dashboard, and simulated User Workflow using Selenium.
- Thoroughly **Unit** and **Integration** Tested the Functional Requirements.

Letterboxd Movie Recommendation web app | *React, Flask, Beautiful Soup, Pandas, Scikit-Learn, Linux*

- **Web scraping** to fetch a user's letterboxd profile, including all watched movies and their ratings.
- Scrapes **top 1-3 k** users data to build **SVD model (used by Netflix)** using async semaphore to optimise **100k** scrapings.

Streamlining Underwriting using Financial Metrics | *Python, Flask, Scikit-Learn, Matplotlib, Figma, Git*

- Predicted if a company will go bankrupt or not with **71% accuracy** (controlling for overfitting).
- Trained a Neural Network, Random Forest, XG Boost, and Linear Regression on the data with a 70-30 split.
- Won **3rd place** at Collegiate Hackathon.

TECHNICAL SKILLS

Languages: Python, Golang, JavaScript, SQL, HTML/CSS, MATLAB

Frameworks: Flask, Nextjs, Gin, React, Django

Developer Tools: Git, VS Code, Kafka, Redis, Vim, Linux, Bash, Figma, UML Design