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**KABIR KNUPP**

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## SUMMARY

I am an ambitious design engineer who's strengths are innovating and prototyping technical solutions to create useful products in exciting markets.

## EDUCATION

- 2018 - 2022 UNIVERSITY** • **Imperial College London, Masters in Design Engineering (First-Class Honours)**
  - Scored **82.1%** in Robotics and **84.4%** in machine learning modules
  - Developed a bio-inspired **tree-climbing robot** to explore the Amazon. Discovered & implemented a novel passive latching gripper design involving a contact-force actuated bistable mechanism.
  - Developed a **motorized key-turning device** from scratch that helps people with arthritis open doors. Focused closely on design for manufacture and user testing to tailor the product to the user.
  - Initiated a **community app** to improve safety on the streets at night. Developed the frontend using the Google Maps API. The venture one a Welnnovate award (sponsored by BP).
- 2011 - 2018 SCHOOL** • **Stanwell Comprehensive School**
  - A-level | Maths, Further Maths, Physics [**A\* A\* A\***]. GCSE | [7A\*'s 6A's].

## PROFESSIONAL

- NOW (1 YR) LENDDIRECT** • **Automation Engineer (Python)** | Building the DomusView web app, a hub for residential property data in the UK. Automating backend processes with GCP and AWS. QA testing with Selenium.
  - Data Engineer (Python)** | Built and took ownership of several Python based microservices to extract, process and upload data (ETL) to our Mongo and SQL databases.
  - API Engineer (Python)** | Took ownership of all the organisation's APIs (Flask-RESTX frameworks).
  - Frontend Prototyper (ReactJS)** | Created React prototypes of new frontend features of the app along with functioning web apps to view our organisations data, hosted them on firebase.
- 2021 (6 MO) COUTTS & CO** • **Product Engineering Consultant** | I worked in Coutts & Co's transformation team where I conducted user research to construct and pitch business proposals to other teams.
  - App Experience Developer** | I prototyped user-interfaces for the Coutts mobile-app and planned machine learning customer algorithms to segment user types for tailored user experiences.
- 2016 - 2021 TUTORING** • Private tutoring in Maths and Physics for International Baccalaureate students. Designed and ran introductory engineering workshops for STEM students. Tutored at Kumon and MyTutor.com.

## SKILLS

- **PROTOTYPING** | FDM printing, lasercutting, workshop tools, Arduino, Raspberry pi
- **CAD** | Fusion 360, SolidWorks, FEA/CFD, generative design, surface modelling, Grasshopper
- **FRONT END** | HTML, CSS, JavaScript, ReactJS, Three.js, GSAP, Figma
- **BACK END** | Python, AWS, GCP, MongoDB, MYSQL, Kubernetes, Pub/Sub, Docker, Jenkins
- **COMMUNICATION** | Ms Office, Adobe Suite, Latex, Video-Creation, Blender, Keyshot
- **LANGUAGES** | English and Italian (fluent), French, Spanish, Welsh, and Punjabi (school level)

## PERSONAL

- PROJECTS** • Created a **new renting platform** to compete with RightMove (for young first timers). Developed the front end using ReactJS to create an engaging card swiping UI that users could interact with.
  - Used rapid prototyping and generative design methods to build and test a **40cm<sup>2</sup> custom quadcopter**. I assembled the circuitry and coded and tuned my own PID flight controller with Arduino.
- HOBBIES** • Building robots | grade six pianist | mixed martial-arts | surfing, snowboarding, skateboarding, and climbing| ex-competitive swimmer for city of Cardiff (2009-2017) | painting | making videos.