Hasha Dar

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EDUCATION

Mechanical Engineering MEng, University College London

Key modules: Manufacturing & Design, Control & Instrumentation Thermodynamics and Fluid Dynamics II, Fundamentals of Materials Mathematical Modelling & Analysis II, Engineering Dynamics Mechanical Engineering Practical Skills, German Level 5 Professional.

A-Levels, Bancroft's School

2017 - 2019

2019 - present

Mathematics A*, Further Mathematics - A, Physics - A, German - B

GCSEs, Bancroft's School

2015 - 2017

4 A*, 4 A, 2 B

RELEVANT EXPERIENCE

UCL Formula Student Racing team

2019 - present

- Management: worked on the costing and Bill of Materials for the Formula Student race car.
- **Electrical design:** Helped design electrical circuits for components on the race car.

UCL Drone team - Student Engineer

2020 - present

CAD: used Autodesk Fusion 360 to design the frame of the drone.

Arkwright Engineering Scholar

ENGINEERING PROJECTS

UCL Racing Club

2021 - present

- CAD: used Autodesk Fusion 360 to design a scaled racing car propelled via gas discharge. Key concepts: aerodynamics, shape optimisation, materials.
- **Simulation:** used MATLAB to make calculations on the performance characteristics of the scale model.

IMechE Challenge - Squash ball line launcher: Design, build and test 2020

- Communication: as the team leader, I liaised with and effectively distributed tasks among my team, playing to the various strengths of my team and meeting deadlines.
- **Design:** designed a line launcher in a team of six to fire a squash ball (40mm) with a line attached into a target with a diameter of 120-490mm. Budgeted to cost no more than £25 and used bought parts as well as proprietary parts.

- IT: used CATIA V5 to produce our first prototype line launcher. MATLAB code was also used for calculations.
- Written communication: a 30 page design portfolio and a PowerPoint presentation were produced to present to a panel of 5 engineering experts.
- End-to-end project management: communication was primarily achieved through Microsoft Teams, where project files were uploaded and worked on together.

OTHER EXPERIENCE

Freelance Photographer & UCL Photo Society President 20-21 2016 - present

- Leadership: Managing a society and committee has proven to be an excellent opportunity to utilise my leadership skills. Working freelance has taught me various skills, such as time management and effective business strategies.
- **Technical skills:** I have self-taught camera techniques and various photography styles including studio, fashion and event photography.
- Creative portfolio: this may be viewed at hashadar.com

Events Executive at UCL Engineering Society

2020 - present

- End-to-end project management: my role at UCLES is to invite and manage speaker events.
- Communication: working as part of a larger, I had to clearly communicate with different departments in order to make sure that events are publicized appropriately and deadlines are met. My role also included outreach and I negotiated with individuals to bring them into our events successfully.

Marketing Executive at UCL Mechanical Engineering Society 2020 - present

- **Design:** Using PhotoShop to design flyers, posters and other marketing material for use on social media.
- **Communication:** Liaising with the whole team is extremely important in order to provide material on time and in accordance with the information given.

Theatre Sound Designer

2017 - present

- Management: I have worked as a lead sound designer for many university and school theatrical performances, integrating into large teams involving stage crew, cast and directors.
- **Technical skills:** I have taken part in training at UCL Stage Crew to create effective and well-structured integrated sound designs for numerous shows.

Private Tutor 2019 - present

- Management: Managing multiple students around my university schedule has taught me discipline and time management skills. Striking a balance is paramount to not falling behind.
- **Communication:** Explaining complex mathematical and physics concepts to younger students requires patience and wit. Finding ways to explain certain concepts differently is important for students who may struggle to understand them.

SOFTWARE

LaTeX: my work can be viewed at github.com/hashadar **Microsoft Office:** Word, PowerPoint, Excel, Teams.

CAD: CATIA V5 and Autodesk Fusion 360.

MATLAB

Adobe: PhotoShop, Illustrator, Premiere Pro.

INTERESTS Languages: Native in English and Urdu. German (B2-C1).

Reader: Regular reader of technology news and current affairs.