Dhruv Sharma

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EDUCATION

- **University College London (UCL)** — London, United Kingdom
  BSc Chemistry with Mathematics; Grade: Predicted First-Class Honours — *Sep 2022 - Jun 2025*
  Courses: *Applied Mathematics 1, Mathematics for Science 1 & 2, Physical Chemistry*
  Activities and Societies: *Quant Society, Asset Management Society, ESG Society, Economics & Finance Society*

- **ACS Hillingdon International School** — London, United Kingdom
  International Baccalaureate; Grade: 39/45 — *Aug 2018 - May 2022*
  Higher Levels: *Mathematics Analysis and Approaches (7/7), Chemistry (7/7), Biology (6/7), Economics (6/7)*
  Activities and Societies: *Model United Nations, Student Council, Cross Country*

EXPERIENCE

- **Schroders** — London, United Kingdom
  Spring Intern — *April 2023*
  - Acquired knowledge of financial markets, investable assets and the interpersonal skills required in asset management.
  - Developed a business strategy and pitched it to other teams, competing for funding.

- **Susquehanna International Group, LLP (SIG)** — London, United Kingdom
  Discovery Day — *March 2023*
  - Received an overview of trading, equity research and trading operations from SIG.
  - Participated in a market-making game, learnt to manage risk and adjust bid-ask spreads to new information.

PROJECTS

- **Spatiotemporal Analysis and Prediction of Crime in Philadelphia**
  Citadel Europe Regional Datathon — *April 2023*
  - Worked with four teammates to conduct a spatiotemporal analysis of traffic stops and crime in Philadelphia, using R to determine police efficiency in locating crime hotspots.
  - Trained an artificial neural network from tenserflow.keras to predict the type and time of a crime in such crime hotspots.
  - Allows for effective crime prevention measures, without the ethical issue of predictive policing targeting certain locations.

- **Deep Learning Model to Measure User Attention**
  Hackathon Submission — *March 2023*
  - Worked in a team of four as part of a 24-hour hackathon to develop an application to analyse the attention of users during video calls and plot a graph displaying how attention varied over the call.
  - Trained a deep learning model with TensorFlow to measure user attention. Created a full-stack web application using Flask, with Python to process uploaded videos and plot a graph using matplotlib.
  - Created for the purpose of allowing university lecturers to gauge students' attention during online calls.

- **Impact of London's Cycling Infrastructure**
  Independent Research Project — *Nov 2020 - Jan 2022*
  - Wrote a 4000-word research paper, analysing the impact new cycle lanes had on the demand for Santander Cycles.
  - Processed over 15 GB of data with languages such as SQL and Python, and libraries such as Pandas, to visualize the positive impact cycle lanes have on cycling demand.
  - Learnt the benefits and drawbacks of using statistical, rather than ML-based models of time series, ultimately performing an STL Decomposition to view changes in cycling demand.

EXTRA-CURRICULARS

- **UCL Quant Society** — London, United Kingdom
  Risk Management Research Group — *Aug 2022 - Dec 2022*
  - Collaborated with team members to produce a weekly journal of published research in risk management.

- **Model United Nations (MUN)** — London, United Kingdom
  Delegate — *Aug 2018 - Jun 2021*
  - Attended THIMUN, one of the world's largest MUN conferences hosted in the Hague annually, representing South Sudan in 2019 and Iran in 2020.
  - Successfully introduced the topic of blockchain technology to an audience with no prior experience, resulting in my resolution being passed by majority vote at Alconbury MUN (over 200 delegates).

ADDITIONAL INFORMATION

- **Languages:** English (Fluent), Hindi (Native)
- **Coding Languages:** Proficient in Python and experienced in SQL, R, HTML, CSS, and LaTeX
- **Certifications:** CS50x - Introduction to Computer Science | Harvard University
- **Interests:** Scuba Diving (PADI Certified Advanced Open Water Diver), Cross Country.