ANISH GUPTA

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EDUCATION

University of Warwick   **Coventry, England**
Master of Mathematics   *2019–2023*
- First year 90.0%, Second year 84.4%, expected first-class honours (1:1).
- Relevant modules: Probability A and B; Games, Decisions and Behaviour; Stochastic Processes; PDE; Intro to Mathematical Statistics; Statistical Laboratory I; Differential Equations: Modelling and Numerics.
- Second Year Essay: Applications of Martingales (including derivatives pricing e.g. European options).

Hurstpierpoint College   **Hassocks, England**
A Levels / EPQ / GCSEs   *2012–2019*
- A Levels: A*A*A*B in Maths, Further Maths, Physics, and Religious Studies. A* in EPQ.
- GCSEs: 9, A* with distinction, 7A*s, 2 As.

PROFESSIONAL EXPERIENCE

Mako Trading   **London, England**
Trading Intern   *Jul 2021–Aug 2021*
- Attended options theory classes, scored 100% in exam covering strategies, Greeks, hedging, portfolio building etc.
- Produced a prize-winning macro research report: forecasted election outcomes and effect on equity options prices.
- Wrote an object-oriented Python tool that efficiently calculates key metrics given a time series of trades.
- Played options market-making simulator and open outcry trading games, acquainted myself with market dynamics.
- Networked with traders, quants, and executives; learnt about different market participants and the wider industry.
- Received an introduction to quant research, helped to analyse a quant trader's models using stochastic calculus.

Warwick Mathematics Institute   **Coventry, England**
Undergraduate Researcher   *Jun 2020–Sep 2020*
- Investigated the latest advancements in ML applied to controlling liquid films. Supervised by Dr Radu Cimpeanu.
- Implemented my novel idea of reframing a control problem as a game for deep reinforcement learning to attack.
- Obtained a 20% improvement over classical methods with limited hardware, training time and parameter tuning.
- Fully funded research project through the competitive URSS scheme, rare for first-year mathematics students.
- Wrote high-performance Navier-Stokes simulations in C, analysed and visualised data in Python, R, and gnuplot.
- Studied fluid dynamics, numerical analysis, and PDEs independently in preparation for the project.

Cede   **Coventry, England**
Co-Founder, CTO   *May 2020–May 2021*
- Co-founded a start-up enabling students to deliver parcels quickly and safely to other students for a dynamic fee.
- Led the programming team, planned key features and milestones, delegated tasks, handled architectural concerns.
- Performed market research, contributed to the business plan, interviewed candidates, helped pitch for funding.
- Designed the pricing algorithm, collected and used analytics data to inform business and technical decisions.
- Chose and coded with the MERN stack, worked with databases, TypeScript, git, unit/integration testing, and CI.

Jane Street (cancelled due to COVID-19), Flow Traders   **London, England; Amsterdam, Netherlands**
Insight Programmes   *2020*
- Accepted onto Jane Street's inaugural program after playing a mathematical game against hundreds of employees.
- Attended lectures on ETFs and FX, learning about Flow Traders and the wider industry. Played trading game.

VOLUNTEERING

Warden Park Secondary Academy   **Cuckfield, England**
GCSE Maths Tutor   *Oct 2017–Feb 2018*
- Built rapport with underperforming students, identified individual strengths and weaknesses in understanding.
- Supplemented past papers with contest-style questions to foster a problem-solving mindset and confidence.
- Observed a marked improvement in my tutees' attitude and performance, with improvements of 2-3 grades.
- Received positive feedback, praising my compassionate explanations of abstract concepts in fresh, engaging ways.

AWARDS/SKILLS/INTERESTS

Awards: International Mathematics Competition (IMC) 2021 Second Prize. Warwick IMC 2021 TST top scorer.
Programming: Most experienced in Python and JavaScript. Experience with R, MATLAB, C++, C, Java, C#, shell scripts. Confident knowledge of data structures and algorithms by self-studying MIT's online course.
Languages: Fluent in English, orally fluent in Hindi, elementary proficiency in French.
Interests: Online poker and speed chess (peak 2001 bullet). Competitive rower (UWBC). Self-taught jazz guitarist.