

# ANISH GUPTA

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## EDUCATION

### University of Warwick

Master of Mathematics

Coventry, England

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

A Levels / EPQ / GCSEs

Hassocks, England

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

Trading Intern

London, England

Jul 2021–Present

- Attended options theory classes, scored 100% in exam covering strategies, Greeks, hedging, portfolio building etc.
- Played Volcube options market-making simulator and open outcry trading games, learning market dynamics.
- Wrote an object-oriented Python tool that efficiently calculated key metrics given a stream of trades.
- Networked with traders and executives, learning about the industry and the wider financial ecosystem.
- Produced a macro report on the French election, forecasting outcomes, outlined effects on equity options markets.
- Will learn about quantitative and systematic trading.

### Warwick Mathematics Institute

Undergraduate Researcher

Coventry, England

Jun 2020–Sep 2020

- Investigated the latest advancements in ML applied to controlling liquid films. Supervised by Dr Radu Cimpanu.
- 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

Co-Founder, CTO

Coventry, England

May 2020–May 2021

- Co-founded a start-up enabling students to safely and quickly deliver parcels 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

Insight programmes

London, England; Amsterdam, Netherlands

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

GCSE Maths Tutor

Cuckfield, England

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 (top 7% ¼+0). Competitive rower (UWBC). Self-taught jazz guitarist.