

# Cem Ratip

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## EDUCATION

### King's College London

BSc Computer Science (First Class 80.2%)

Strand, London

Sep. 2021 – July 2024

### Trinity School of John Whitgift

4 A-Levels: Maths (A\*), Further Maths (A\*), Computer Science (A\*), Economics (A)

Croydon, Surrey

Sep. 2019 – July 2021

## EXPERIENCE

### Software Engineering Internship

Expedia Group

May 2023 – Sep. 2023

Angel, London

- Worked on bug fixing for the following Expedia Group brands: Vrbo, Expedia, Hotels.com, Bookabach and Stayz.
- Had my fixes released to production and demonstrated my work to the team during standups.
- Used Java, Kotlin, Node, GraphQL and Docker and wrote unit tests with JUnit, kotlin.test and Mockito.
- Communicated with other teams for approvals, requirement elicitation and information on other microservices.
- Worked in an existing team of 12 and used Jira for project management.

### Backend Software Engineer

Green Group Enterprise

Aug. 2022 – Aug. 2023

Remote

- Developed a REST API to power the company's platform using TypeScript, Nest, MongoDB, Heroku, AWS Lambda, and AWS S3.
- Wrote unit and e2e tests, created a database seeder and implemented authentication procedures using passportJS.
- Mentored newcomers, managed code reviews, and worked in a CI/CD environment.

### Code for Good Hackathon

JPMorgan

Oct. 2022

Bishopsgate, London

- Collaborated in a 5-person team to create a CRM system for a tuition business within 24-hours.
- Discussed requirements with beneficiaries and developed using Flask, Bootstrap, and a MySQL database.
- Presented the final product for client feedback.

### Web Development Internship

Satalia

June 2019 – July 2019

Islington, London

- Collaborated in a 3-person team to develop an informational AI website using React and deployed with Netlify.
- Gained insight into how the company coordinated teams, met client specifications and managed version control.

## PROJECTS

### Undergraduate Research on Trading Strategies using Machine Learning | Python, TensorFlow April 2024

- Conducted a comprehensive analysis of the efficacy of technical indicators in financial market trading using Long Short-Term Memory (LSTM) models.
- Trained LSTMs on 144 unique datasets derived from the S&P 500, BTC/USD, and EUR/USD across several time frames and date ranges.
- Developed a trading simulator to emulate a live trading environment to measure model performance.
- Executed the program in batches on a high-performance computing node at King's College London.
- Found that technical indicators often do not outperform OHLC data alone, especially in shorter time frames.
- Currently extending my research by applying model predictions to live financial markets.

### Online Rental Marketplace (Frontend only) | React, Redux, Tailwind, Figma

May 2024 – Current

- Developing a peer-to-peer video game rental website (<https://game-rental-marketplace-website.vercel.app>).
- Using React, Redux and Tailwind for frontend and Figma for design and prototyping.

### Automated Cryptocurrency Trading Algorithm | Python, AWS EC2

Oct. 2019

- Created an algorithm to trade cryptocurrency pairs using the RSI indicator on live market data from an API.
- Executed the algorithm on an AWS EC2 instance for 14 days, yielding a 7% net profit.

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, Kotlin, Scala, JavaScript, TypeScript, MySQL, NoSQL, HTML, CSS

**Frameworks:** Node.js, React, Flask, Django, Redux, Tailwind, Express, Nest, Kafka, JUnit, Mockito, TensorFlow

**Developer Tools:** AWS EC2/S3/RDS/Lambda, Git, Docker, Heroku, Vercel, Netlify, MongoDB, Firebase, Jira