

# EAN SENG CHANG

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## ABOUT

Master's student studying mathematics and computer science in Oxford. Proficient in programming languages including C++, Java, Typescript, Python, Haskell and Scala. Enjoys learning new technologies and applying them to projects. Avid competitive programmer well-versed in data structures and algorithms. Thrives in a collaborative setting and picks up new skills quickly, both technical and social.

## EDUCATION

### University of Oxford

MSc in Mathematics and Computer Science

2022 - 2026

- Year 1 and Year 2 Grade - First Class Honours
- **Relevant Courses:** Machine Learning, Probability, Linear Algebra, Functional Programming, OOP, N-dimensional optimisation, Concurrent Programming, Algorithms and Data Structures, Computer Security, Computer Networks

### ACS Egham International School

International Baccalaureate Diploma Program

2018 - 2022

- Diploma score: 41/45 w/ 777 in HL subjects: AA Mathematics, Physics, Computer Science

## EXPERIENCE

### Eutelsat

July - Oct 2025

*Software Engineer Intern*

*London, UK*

- Designed and implemented a serverless architecture featuring a multi-layered caching system (API Gateway, Lambda, DynamoDB), successfully reducing monthly operational costs by over £2,000.
- Engineered multiple end-to-end data pipelines to ingest, validate, and store data in PostGIS and S3, and optimized a core Lambda function to achieve a 90% improvement in execution speed.
- Strengthened code quality by authoring comprehensive unit and integration tests with pytest and embedding them into the CI/CD workflow for automated validation and regression testing on every commit.

### Ghyston

July - Aug 2024

*Software Developer Intern*

*Bristol, UK*

- Authored features and developed full-stack applications with React on the front-end and .NET on the back-end.
- Migrated and maintained the data in the back-end when implementing new features, such as updating the activity of over 100 active employees through SQL migrations.
- Improved the user experience in the front-end by designing and creating a clean and responsive dynamic React user interface, such as implementing dashboards or visualising data.

### CraneOn

June - July 2023

*Web Developer Intern*

*Remote, UK*

- Developed a multi-page React front-end website with UI components that keep track of users using authentication and display the data from the back-end.
- Designed and integrated a Mongo database for the backend with CRUD operations, then connected it to the front-end using Express middleware.

## PERSONAL PROJECTS

### ProofMap Python, React, LLMs

Mar 2025 - May 2025

Developed a website that takes a PDF of lecture notes and uses LLMs to extract theorem information to help students study. Then builds an interactive dependency graph of theorems to visualise how each result depends on the others.

### Vision-Based Price Comparison Tool Python, Node, Express, Raspberry Pi

Mar 2024 - May 2024

Trained a machine learning model that was able to classify brands from images of electronic products on a Raspberry Pi with 80% accuracy. It then used this information to search online to give the user a price range.

### Chess Elo Predictor Python, Keras, Kaggle

Dec 2023 - Jan 2024

Analysed over 2 million positions in 100k chess games and created a convolutional neural network model that can predict the Elo of a chess player given the moves of the game.

## TECHNICAL SKILLS

**Languages:** Java, Python, C++, JavaScript, TypeScript, HTML/CSS, Haskell, Scala, SQL, Golang

**Frameworks:** React, Node.js, Bootstrap, Express, Dotnet

**Tools:** Linux, Git, Bitbucket, Postman, VS Code, JetBrains, Mongo, Docker, LaTeX, AWS CDK

**Libraries:** Pandas, NumPy, Matplotlib, Keras, Pytest

## AWARDS AND INTERESTS

- Collaborated in competitive programming such as ICPC (23rd team in the UK)
- 3x Gold certificates in UKMT and British Math Olympiad Qualifier
- Chess Tournament Winner, led High School and St Anne's College Chess Club
- **Interests:** Speedcubing, Badminton, Chess, Poker