

Neel Bollapragada

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Education

University of Edinburgh (2023 - 2027)

Computer Science, Bachelor's of Engineering

- Predicted: 1st

Hutchesons' Grammar School (2021 - 2023)

- Advanced Highers: Computer Science (A), Mathematics (A), Physics (A). Highers: 6 A grades including Computer Science, Maths, Physics, Engineering Science, English, Chemistry

Experience

School of Informatics, University of Edinburgh

Lab Demonstrator

Edinburgh, United Kingdom

September 2025 - ongoing

- Assisted **over 200** second-year Informatics students across weekly labs with lab exercises and coursework, providing guidance on **MIPS assembly**, **C programming**, **binary arithmetic**, **processor design**, and **memory hierarchy**.
- Supported students in **debugging code** and **applying theoretical concepts**, offering help in person and online via Piazza.

School of Informatics, University of Edinburgh

Academic Advisor and Tutor

Edinburgh, United Kingdom

September 2024 - May 2025

- Guided a cohort of **15** first-year Informatics students in adapting to university study, academic content, and programming software.
- Advised on career, society, and course decisions, connecting students with opportunities and resources beyond the curriculum.

MagiKats Tuition Centres

Tutor

Edinburgh, United Kingdom

August 2024 - ongoing

- Delivered interactive tutoring across multiple subjects, helping **40+ students weekly** to further develop effective learning and study techniques.
- Communicated progress to parents through constructive feedback, strengthening student outcomes and support networks.

Projects

Fridge Tracker Mobile App (*Tech Stack: React Native, Appwrite, SQLite, ExpressJS, NativeWind*)

- Developed a full-stack mobile application to reduce food waste and streamline household food management
- Utilized **Appwrite** for cloud storage, **SQLite** for offline storage, **Open Food Facts** and **OpenRouter API** via **ExpressJS** backend, and **React Native** for user interface

Compiler written in C++

- Built a custom compiler in C++, implementing a pipeline from lexical analysis to x86 assembly code generation
- Designed and wrote a **lexer**, **parser** to **abstract syntax tree**, and **semantic analysis** for minimal C programs
- Gained strong understanding of compiler architecture, low-level memory management, and programming language design

Movie Info App (*Tech Stack: React Native, Appwrite, NativeWind*)

- Created a mobile movie information app to display latest, trending and user searched movies, with implemented search functionality and one-tap detail views
- Used **Appwrite** for cloud storage, **TMDB API** for movie data, and **React Native** for user interface

Technical Skills

Languages & Libraries: Python, C, C++, JavaScript, Java, ReactJS, Haskell, HTML, CSS

Developer Tools: Git, Firebase, Appwrite, Jira, LaTeX, Postman