

Ayush Rochlani

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PROFESSIONAL SUMMARY

Ambitious Computer Science student with a strong foundation in full-stack development, systems programming, and collaborative problem-solving skills, proven through successful implementation of complex systems including Linux kernel modules and real-time data applications.

SKILLS

- Languages : C, Python, Java, JavaScript
- Tools : Git, Docker, MySQL, Postgres
- Key Skills : Leadership, Communication, Collaboration, Time Management, Teaching, Unit Testing, Object-Oriented Design (OOP), Developer Tools

EDUCATION

- University of Edinburgh

Bachelor of Science in Computer Science

Edinburgh, Scotland, United Kingdom

Sep 2022 – Expected May 2026
- University of Illinois at Urbana-Champaign

Computer Science - Study Abroad Program

Urbana, Illinois, United States of America

August 2024 – May 2025
- Poddar Brio International School

Senior School Certificate Examination, CBSE (4 A1s and 1 A2)

Mumbai, Maharashtra, India

May 2020 – Jun 2022

EXPERIENCE

- Tutor - The School of Informatics

University of Edinburgh

Sep 2023 – Dec 2023

Edinburgh, Scotland, United Kingdom

- Led **weekly discussion sessions** to reinforce course concepts and support student learning for a group of 15 students, demonstrating initiative in fostering a collaborative learning environment
 - Graded and provided feedback on weekly assignments, ensuring timely and constructive evaluation

PROJECTS

- SideQuests (Pair Project)

React Native, Expo, Supabase, NativeWind, Git

- Created an app to host and participate in scavenger hunts in teams with a **realtime** leaderboard
 - Implemented secure user authentication, including anonymous login functionality
 - Integrated Expo Image Picker to enable users to **upload images** within the app
- Wordle Clone

React, Git

- Developed a fully functional Wordle clone using **React**, integrating the Free Dictionary API for word validation and Random Word API for word generation
 - Implemented an interactive **on-screen keyboard** component for enhanced usability
 - Designed modular component architecture for improved code maintainability
- Tracking and Mapping Endangered Species (Group Project)

Python, Tensorflow, Flask, Svelte, Git

- Winner** - Most Creative Use of Machine Learning - **Hack The Burgh 2023** (Hackathon)
 - Built a software to locate and classify endangered animals using ML and then plot them on a heatmap
 - Created a server using Flask to communicate with the front-end heatmap using JSON
- Linux Kernel Module for CPU Time Monitoring

C, Ubuntu, Git

- Developed a Linux kernel module to monitor process CPU usage using kernel timers, workqueues, and mutex locks for thread safety
 - Implemented **proc filesystem** interface allowing user applications to register and retrieve CPU usage statistics
 - Applied **Two-Halves** interrupt handling approach to separate time-critical interrupts from resource-intensive operations, ensuring system responsiveness and accuracy