

Aaditya Singh

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EDUCATION

University of Adelaide <i>Bachelor of Computer Science</i> GPA: 6.75/7	Feb 2025 – Nov 2027 (Expected) Adelaide, SA
<ul style="list-style-type: none">Relevant Coursework: Algorithms Design & Data Structures, Object-Oriented Programming, Statistical Analysis & Modeling, Discrete Math	

EXPERIENCE

Pepperpath <i>Project Intern</i> React, TypeScript, Firebase, ReactFlow	Jun 2025 – Present Adelaide, SA
<ul style="list-style-type: none">Architected a node-based automation interface using React, TypeScript, and ReactFlow, enabling non-technical users to visually configure AI-powered workflowsIntegrated OpenAI GPT APIs to power customisable AI prompts, allowing users to generate automated insights, email notifications, and data-driven reports without coding expertise.Built Firebase NoSQL backend with real-time sync, secure authentication, and scalable database schemas for a growing client-base.	

PROJECTS

Lorenz Predictability Horizon <i>Python, SciPy, Plotly</i>	Dec 2025
<ul style="list-style-type: none">Implemented an interactive 3d simulation of the Lorenz system of differential equations to study sensitivity to initial conditions and parameter-driven transitions to chaos.Designed a sliding-window correlation metric to quantify loss in predictability between nearby trajectories over time.	
Royal Clash <i>C++, SFML</i>	May 2025
<ul style="list-style-type: none">Led a team of 3 to build a 2D SFML real-time multiplayer game using modern C++ practices.Implemented a flexible Builder Design Pattern with smart pointers to manage the creation of 20+ interdependent classes, improving system modularity and scalability.	
RLock <i>Python Flask, SQLite, JavaScript</i>	Sep 2024 – Oct 2024
<ul style="list-style-type: none">Developed a Flask web app that auto-detects user region and surfaces real-time streaming availability via APIs with direct provider links.Engineered intelligent title matching to correct user input and improve search accuracy.	

COMMUNITY INVOLVEMENT

Software Team Member <i>Adelaide Rover Team</i>	Jun 2025 - Present
<ul style="list-style-type: none">Collaborated within a 4-member team to design and implement the Water Prospecting Subsystem.Developing CAN bus communication and micro-controller firmware (C) to enable reliable prospecting sensor hardware integration and control.	
SIG Algothon 2025 <i>Susquehanna</i>	Jun 2025 - July 2025
<ul style="list-style-type: none">Ranked top 15% of global entrants in SIG's quantitative-trading hackathon.Implemented stock trading algorithms using Numpy, Pandas, Scikit including moving averages, regression, machine learning to optimize sharpe-ratio.	
External Relations Officer <i>Society of Quantitative Analysis and Data Science (150+ members)</i>	Aug 2025 - Present
<ul style="list-style-type: none">Organised an industry panel with 50+ registered attendees by coordinating speaker outreach, managing event logistics, and executing targeted promotion across campus and social channels.	
Competitive Programming League <i>Adelaide Competitive Programming Club</i>	Mar 2025 - Nov 2025
<ul style="list-style-type: none">Competed in a team of 3, ranked 10th place in the University-wide league under strict time constraints.Solved complex algorithmic problems while ensuring optimal program runtime.	

TECHNICAL SKILLS

Languages: C++, C, Python
Frameworks & Libraries: React, Tailwind CSS, ShadCN, ReactFlow, Flask, SFML, SciKit, NumPy