

ANHAD SACHDEVA

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EDUCATION

Bachelor of Mathematical and Computer Science

And Honours Degree of Bachelor of Computer Science

Feb 2023 – Nov 2026

The University of Adelaide, Australia

- **Relevant Course Work** – Artificial Intelligence, Machine Learning, Parallel & Distributed Computing, Distributed Systems, Algorithm & Data Structure, Computer Systems, System Programming, Object Oriented Programming.
- Our Team placed **3rd out of 44 teams** in the University Wide Programming Competition.
- Served as a 2024 University Open Day Representative.

WORK EXPERIENCE

Software Engineer Intern, Stealth Startup

Nov 2024 – Feb 2025

- Collaborated on implementing a scalable SaaS solution using Django (Backend), React Native (Frontend).
- Integrated a secure payment system using Lemon Squeezy.
- Refactored API interaction modules with TypeScript, ensuring type safety.
- Developed webhooks to manage real-time payment events, enhancing responsiveness and service accuracy.
- Built an access token authentication system for API call security.
- Increased platform reliability by performing comprehensive unit testing with PyTest.

PROJECTS

Redis-Inspired In-Memory Key-Value Store | C++

Dec 2024 - Jan 2025

- Built a scalable, high-performance in-memory key-value store with Redis-like functionality (SET, GET, DEL).
- Designed a TCP-based client-server architecture using non-blocking I/O to support concurrent client requests.
- Implemented custom hashtables, AVL trees, and heaps for efficient storage, sorted sets, and TTL expiration logic.

Distributed Weather Aggregation System | Java, JSON, RESTful API

Aug 2024 – Oct 2024

- Developed a multi-threaded weather aggregation server capable of handling concurrent PUT and GET requests using Lamport clocks for consistency.
- Designed and implemented an efficient data expiration mechanism, removing stale data every 30 seconds.
- Ensured robustness with fault-tolerant clients and servers, capable of handling network and system failures.
- Achieved seamless communication between clients, servers, and content servers using socket programming.
- Built comprehensive automated tests, achieving high reliability under concurrent access and updates.

Research Assistant

Aug 2023 – Jan 2024

- Ensured data annotation quality [for The Manga Whisperer](#): Automatically Generating Transcriptions for Comics published by the University of Oxford's Visual Geometry Group.
- Stress-tested the LISA Tool, identifying and resolving 4+ bugs (e.g., invalid coordinate calculations), enhancing tool reliability for computer vision research.
- Streamlined data processes, advancing the accuracy and efficiency of computer vision research.

Terminal Chess | C++

Oct 2023 - Nov 2023

- Developed a fully functional terminal-based chess game in C++, supporting advanced mechanics like promotion, stalemate, castling, and check/checkmate detection.
- Designed efficient algorithms for move validation, game state management, and piece movement, achieving real-time performance for two-player gameplay.

TECHNICAL SKILLS

Languages:

Proficient: C++. **Familiar:** SQL, Java, Python, JavaScript

Tools & Technologies/Frameworks:

Git, RESTful API, Django, React Native, TailwindCSS, PyTest