

# Diwas Mainali

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## EDUCATION

### University of New South Wales

Bachelor of Computer Science

January 2022 – December 2025

Kensington, NSW, Australia

## PROFESSIONAL EXPERIENCE

### Founder

May 2025 – Present

*Cram and Conquer | Live Demo*

*Sydney, Australia*

- Architected a full-stack productivity platform using React, Node.js, and MongoDB, featuring real-time group study sessions, customizable Pomodoro timers, and advanced user analytics with 99%+ uptime.
- Implemented secure authentication and payment systems with Google OAuth integration and Stripe payments, including comprehensive rate limiting, DDoS protection, and XSS prevention for enterprise-level security.
- Developed premium features ecosystem including interactive study companions with advanced animations, contribution graphs, and synchronized group sessions, driving user engagement and monetization.
- Optimized performance and scalability through efficient database design, automated session cleanup, token refresh mechanisms, and responsive design patterns, ensuring seamless user experience across all devices.

### Fullstack Developer Intern

September 2025 – December 2025

*Lorgan Pty Ltd*

*Sydney, Australia*

- Implemented a real-time patient monitoring system, ensuring separation of concerns and modularity.
- Developed a real-time alerting system using WebSockets to instantly push critical patient vital-sign notifications.
- Engineered the relational data model and wrote queries for the patient monitoring application using PostgreSQL.
- Engineered responsive React components to deliver a modern, seamless, and interactive user interface.

### AI Frontend Development Trainer

April 2025 – Present

*Outlier*

*Remote*

- Trained AI systems to improve frontend development capabilities by creating precise implementation examples.
- Debugged and refined AI-generated code to match design specifications from reference screenshots.
- Created optimized React and HTML/CSS solutions that serve as high-quality training examples for AI learning.
- Collaborated with AI engineers to identify and address patterns in frontend code generation deficiencies.

### Retention Specialist

November 2024 – April 2025

*Volkswagen Financial Services (via Forrest Contact)*

*Remote*

- Managed 10-15 daily refinancing inquiries in Salesforce, providing quotes for residual loans at 98% accuracy.
- Processed loan restructuring for 100+ clients monthly, implementing flexible payment solutions in Salesforce.
- Settled 20+ customers into new loans monthly through efficient application processing and structuring.

## TECHNICAL PROJECT

### GridBase — An Airtable Clone | Demo

Next.js, TypeScript, tRPC, PostgreSQL, Tailwind

- Architected and optimized a high-performance virtualized data grid utilizing TanStack Table, successfully rendering and managing datasets up to millions of rows without compromising scroll or load speed.
- Developed a real-time, collaborative editing experience by integrating optimistic updates with a debounced, batch-saving system to efficiently synchronize user changes and minimize database load.
- Engineered a dynamic query and filtering engine using raw PostgreSQL (SQL), enabling users to construct and execute complex, multi-layered filters and sorts against the persistent data store with sub-second latency.
- Pioneered a full-stack T3 application structure, establishing end-to-end type safety across the entire stack via tRPC and enforcing robust data integrity and validation through Zod schemas.

## EXTRACURRICULAR

### UNSW Chess Society Volunteer

- Assisted in organizing and managing daily chess events for over 100 members.
- Provided chess instruction and strategy tips to beginners, enhancing their skills and enjoyment of the game.

## TECHNICAL PROFICIENCIES

**Programming Languages:** Python, C, C++, JavaScript, TypeScript, HTML, CSS, Bash

**Frameworks:** React.js, tRPC, Tailwind CSS, Node.js, Express.js, MongoDB, Git, REST APIs, PostgreSQL