

Nicholas Garcia-Scholtz

[GitHub](#) | [LinkedIn](#) | [Website](#)

Education

The University of Auckland

Bachelor of Software Engineering (Honours)

- Dean's Honours List (2024, 2025) – Top 5% of cohort
- Relevant Courses: Data Structures & Algorithms (A+), Object-Oriented Programming (A+), Software Quality Assurance (A+), Database Systems (A+), Computer Engineering (A+)

Work Experience

Software Engineering Intern | ZEIL

Nov 2025 – Feb 2026

- Designed and implemented a Redis-backed token bucket rate limiting system using atomic Lua scripts, enforcing per-user and per-IP limits across API endpoints
- Architected a secure authentication system using Supabase Auth, JWT client authentication, and row level security policies to ensure privilege based data access
- Implemented video processing pipelines by storing large media assets in Google Cloud buckets and generating signed URLs for secure transfer to Google Gemini for AI analytics
- Built REST APIs and backend services using TypeScript, Node.js, Express, and Next.js, enabling integration with frontend applications, Chrome extensions, and internal services
- Enhanced search accuracy and typo tolerance by creating a fuzzy search algorithm that combined Levenshtein distances, prefix weights, and substring scoring for rankings
- Created frontend applications using React and TypeScript, delivering responsive and reliable user interfaces for both web and Chrome extension environments
- Reduced query latency by ~90% through Redis caching and targeted backend optimisations

Projects

University of Auckland Investment Club Website | MongoDB, Next.js, React, TypeScript

[GitHub](#)

- Worked in an agile team to develop an application that tracked the club's \$30K investment portfolio and integrated third party market data widgets for real time NZX/ASX price display
- Implemented membership sign-ups for the club's 1,500+ members using betterAuth and Google OAuth, including REST APIs for email domain verification
- Integrated Stripe payments for event registration, supporting Apple Pay, Google Pay, and other wallet based methods

Trial AI | Java, JavaFX, Git, OpenAI

[GitHub](#)

- Built a multi-scene JavaFX courtroom simulation, applying design patterns to build reusable scene templates and scalable game logic while reducing code duplication
- Integrated OpenAI's GPT API to develop autonomous AI and human witnesses, enabling contextualized, character driven chat interactions within the simulation
- Implemented multithreading and concurrency to handle real time chat, timers, and audio feedback, ensuring a responsive and seamless user experience

Extracurriculars & Competitions

Software Engineering Students Association (SESA) | Industry Coordinator - Organise and run events for our 1,000+ members, connecting students with industry professionals

Web Development & Consulting Club (WDCC) | Developer, Tech Executive - Run technical workshops for our 1,100+ members and oversee three client projects involving 30 project members. Build and maintain internal tools and existing deployed websites used by the club and external clients

AllUni Competitive Programming Competition 2025 - 1st in NZ, 3rd Overall (Div B, 93 teams)

New Zealand Programming Contest - 1st in Auckland, 2nd Overall (2nd Year Division)

Skills

Languages & Frameworks: C++, Java, Python, C, MATLAB, TypeScript, JavaScript, React, HTML/CSS, Tailwind CSS

Technologies: Next.js, Node.js, Express, MongoDB, Supabase, JUnit, Mockito, Maven, Git/GitHub