

# Richard Yang

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## Education

**The University of New South Wales**

Bachelor of Science (Computer Science)

**Awards:** Dean's Honours List for Computer Science (2021)

**Technical Skills:** Python, Java, C, TypeScript, HTML/CSS, React, PostgreSQL, Rust, Django, Linux, Git

## Experience

**Junior Software Developer**

**Boomerang Studios**

*April 2025 - Present*

- Build front-end features in TypeScript within a custom 2D engine, shipping interactive UI and feature logic to production releases.
- Engineer **event-driven state machines** to manage complex feature transitions and UI behavior, reinforcing strong understanding of **software architecture patterns**.
- Built reusable UI components and animation controllers using **keyframe sequencing**, easing functions, and custom FX timelines for dynamic symbol interactions.
- Applied **object-oriented principles** to extend engine components, enabling clean abstraction, reuse, and maintainability across game features.

**Vice President Operations**

**UNSW Adventure Society**

*Sept 2024 – Sept 2025*

- Deployed a responsive [community website](#) for UNSW Adventure Society with **700+** active members.
- Developed slice-based components (Next.js) and resolved deployment issues (Prismic, Vercel), enabling non-technical users to manage content and future-proofing the application.
- Designed and integrated a Stripe-based payment workflow to replace manual transfers, which streamlined membership onboarding and generated over \$7,000 in revenue.
- Collaborated with the executive team to manage society operations and lead marketing initiatives for a 40-person internal team, amassing 3,000+ social media followers.

## Projects

**[EarnIt](#) | Javascript, HTML, CSS**

- Built a Chrome extension that blocks distracting sites until users complete habit-building challenges, combining browser controls with verified completion logic.
- Integrated MoveNet pose estimation in TensorFlow.js for realtime push-up/pull-up verification to gate access to blocked domains.
- Leveraged Chrome Extension APIs (Storage, WebRequest, History) to persist user rules, detect browsing patterns, and recommend domains for blocking.

**TorchWeaver | React, Django REST, PostgreSQL, Python | Capstone Project (96%)**

- Built a visual no-code neural network designer, enabling non technical users to rapidly prototype architectures via drag-and-drop and export executable PyTorch code.
- Implemented React canvas workflows (palette, node configuration panels, connection editing) with real-time validation and actionable error messaging to prevent invalid graphs.
- Integrated authenticated create/save/load workflows using Auth0 with a Django REST API; persisted design graphs (nodes, edges, parameters) to PostgreSQL with autosave for reliable session restore.

## Leadership & Initiative

**[ARCA](#) Founder**

- Independent e-commerce brand sourcing high-demand fashion and collectibles, achieving 500+ sales.
- Manage a small internal team, customer communication, and social media branding to drive growth