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*
- Develop front-end features in TypeScript within a custom 2D engine, shipping interactive UI and feature logic to production releases.
- Engineer **event-driven states** 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-proof 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 Flow canvas** workflows (palette, node configuration panels, connection editing) with real-time validation and actionable error messaging to prevent invalid graphs.
- Integrated **authenticated workflows** using **Auth0** with a **Django REST API**; persisted design graphs (nodes, edges, parameters) to PostgreSQL with **autosave** for reliable session restore.

Leadership & Initiative

Founder - ARCA
- 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.