

Eric Dai

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Education

The University of New South Wales (UNSW Sydney) Feb. 2018 – Nov. 2024
Bachelor of Science (Computer Science) and Bachelor of Engineering (Mechanical, Honours) WAM: 76.2

Technical Skills

Experienced With: JavaScript/TypeScript, Python, Shell (Dash/Bash), HTML, CSS • React.js, Material UI, pytest, Flask, REST • Git, Figma, Jira

Acquainted With: Java, C, MIPS asm, SQL • Chakra UI • Node.js, MongoDB, HCI, Networking

Projects

Tuesday: team task management system Sep. 2022 – Dec. 2022

HTML, CSS, JavaScript, React.js, Material UI, Python, pytest, Flask, MongoDB, REST, Jira, Figma, Git

- Led team of five through three **agile** sprints to develop a single-page application.
- Increased user productivity by facilitating seamless task creation and assignment, adding team members, and monitoring peers' workload scores out of 100 to evenly distribute and reassign tasks.
- As a team, defined 12 functional and non-functional requirements from 18 user stories and 72 acceptance criteria in **Jira**, based on user research and market opportunities.
- Collaboratively designed 40 UI/UX layouts via storyboards in **Figma** to satisfy requirements.
- Emphasised usability and responsiveness while maintaining correct **React** functionality.
- Refactored and tested **Python** functions, achieving over 90% coverage with **pytest** during Sprint 1.
- Standardised routing and error handling during frontend-backend integration meetings with **JavaScript**, **Flask**, and **REST** API conventions, validated with comprehensive end-to-end testing.
- Devised an **algorithm** that prioritises tasks based on deadlines, importance, and dependencies, leveraging directed graphs, DFS, and topological sort to determine order in $O(n^2)$ time and space.

TimerQ: countdown timer queue Jul. 2024 - Present

HTML, CSS, TypeScript, React.js, Chakra UI, Git

- Developed a web app that manages multiple countdown timers in a queue with **TypeScript** and **React**.
- Provides hands-free experience for users to streamline daily routines, such as exercise and cooking, by automatically starting next timer in queue after previous one ends.
- Ensures flexibility for users with real-time adjustments, including adding, deleting, and editing timers.

reset-css: opinionated CSS reset Apr. 2024 – Jul. 2024

HTML, CSS, Bash, Git

- Streamlined web dev workflow for multiple developers by creating a well-documented **CSS** reset, integrating four prominent resets via detailed research of **HTML** elements and **CSS** declarations.
- Shows reset's effect on 49 common elements, readability, and responsiveness through a production website built with a **Bash** script.

sheepy: basic Dash script to Python code transpiler Jun. 2023 – Jul. 2023

Python, Dash, Git

- Learnt **Dash** commands and **Python** equivalents via test-driven development of transpiler in **Python**.

Git Cheatsheet: detailed reference of common Git commands Jun. 2024 – Jul. 2024

GFM, Git

- Created a **Git** reference clarifying 93 commands to assist developers, based on research and testing.

Relevant Experience

ac-redesign, Ashfield | UI/UX Designer Aug. 2021 – Sep. 2021

- Designed a modernised mockup for Ashfield Cycles' desktop website homepage using **Figma**.
- Applied design principles and usability heuristics to improve user experience and engagement.

Project Prosthesis, Sydney | Co-Founder, Mechanical Engineer May 2018 – Sep. 2019

- Communicated in team of four, prototyped modular prosthetic legs for children in developing countries.
- Built two prototypes that adapt to growth and damage while improving gait using CAD and 3D printing.