# Dan Huy NGUYEN

danhuynguyen1@gmail.com | 0421 720 990 | LinkedIn | GitLab | GitHub

# EDUCATION

#### University of New South Wales

Feb~2018-April~2024

Bachelor of Engineering (Hons) (Mechatronics) / Bachelor of Science (Computer Science)

- Graduated 1st class.
- Total weighted average mark of 82.622.

#### WORK EXPERIENCE

#### Accenture

Application Development Analyst

May 2024 - Current

• Configuring and testing CRM in the public sector with Salesforce and Azure DevOps.

#### **UNSW**

 $Casual\ Academic$ 

Sep 2021 - Current

- Involved in planning course curriculum and content from assessments to lectures for C++ and robotics courses across all year levels.
- Taught and mentored classes, ran help sessions, and marking for engineering design, robotics, and C++
  courses.
- Lead migration for delivery of course content using GitHub Classrooms.
- Optimise processes using scripting, build tools, CI/CD tools.
- List of courses taught for: DESN1000, DESN2000, MTRN2500, MTRN3100, MTRN4110, COMP9024.
- List of courses administrated for: MTRN2500, MTRN3100, MTRN4231.

#### PROJECT EXPERIENCE

TV Mate

May 2024 - June 2024

 $Application\ Developer$ 

• Designed and implemented a Flutter app with mDNS-enabled IR-firing IoT devices (ESP8266) for remote control of multiple TVs via websockets over LAN.

### Split Payment App

 $\mathbf{Sep}\ \mathbf{2023}-\mathbf{Current}$ 

Application Developer

- Solely prototyping multiplayer split-payment app with fractional splitting enabled by multi-range sliders and OCR for receipt-digitisation.
- Built with Firebase, Firestore, React, Mantine UI, Tabler, immer, react-slider, tesseract.js, wouter, zustand, Vite, Vitest.

#### Offworld Robotics

Project Manager

Dec 2020 – June 2022

- Supervised leadership team to conduct operations with respect to project management plan and systems engineering management plan.
- Centralisation and refinement of processes, structures, documentation, and workflows onto GitLab to improve
  organisational efficiency and standardise quality.
- Developed learning curriculum covering design and implementation of robotic systems for upskilling of Offworld Robotics students.

### COMPETITION EXPERIENCE

Accenture Technology Bootcamp

Feb 2022

• Developed proof-of-concept "GitLab Team Management" application in Django/Python connecting to GitLab API to enhance people management capabilities.

#### WIESoc x IBM Hackathon

Oct 2020

• Developed prize-winning "COVID Safe Link" website in Flask/Python connecting to Google Maps API and NSW Open Data Platforms to plan safe travel through populated areas and public transport.

#### ACADEMIC PROJECTS

#### COMP6080 - Web Front-End Programming

May 2023 – Dec 2023

- Built frontend Airbnb clone (using React, Mantine, SWR, Axios, Wouter, Zustand) given a backend API to achieve course mark of 90.
- Built frontend web messaing platform (in pure vanilla JS, HTML, and CSS) given a backend API and using Web APIs like HTML DOM, Intersection Observer, and Navigation.

#### COMP3900 - Computer Science Project

Feb 2022 - May 2022

- Revamped "GitLab Team Management" Django project with full-stack boilerplate and upskilled team on Django framework.
- Implemented SSO with GitLab web service using django-oidc, GitLab API calls on top of requests library, text search with django-haystack, and object-level permissions with django-rules.

#### MTRN4110 - Robot Design

May 2021 - Sep 2021

- Architected the robot software for a maze-solving robot with autonomous navigation using world imaging data processed with OpenCV.
- Hacked Webots build platform to simultaenously execute C++ and Python programs with Cython interface.

#### MTRN3500 - Computing Applications in Mechatronics Systems

May 2020 - Sep 2020

- Developed multi-process application for LiDAR and GNSS processing, and teleoperation of a robot using shared memory IPC.
- Built TCP/IP client with WinSock2 to connect to robot over WiFi.
- Implemented GUI to visualise robot data processing and motion using OpenGL.

#### ACHIEVEMENTS

• UNSW Dean's Honours List.	2021
• UNSW Dean's Honours List.	2020
• UNSW Dean's Honours List.	2019
New Colombo Plan Scholarship Recipient.	2018

#### TECHNICAL SKILLS

#### Robotics development

- ROS1/2, RViz, Gazebo.
- Webots.
- URDF, SDF.
- Low-level C/C++14.
- C++20 (Catch2, GoogleTest, doctest, GoogleBench- Machine Learning mark, CxxTest).
- Assembly (MIPS)
- MATLAB (Simulink).

- Firebase (Hosting, Firestore).
- Flutter (Provider, Bonsoir).
- AWS (Amplify, EC2, S3).
- Nginx.

# Full Stack App Development

- HTML, CSS, JS, TS.
- React (Mantine UI, Chakra UI, React Hook Form, React Query, SWR, Wouter, Zustand).
- PostgreSQL, PL/pgSQL.

- Google ML Kit.
- TensorFlow (Lite).

# Other Programming Languages

- Python  $\leq 3.9$  (Jupyter, OpenCV).
- Java 17 (OOP, design patterns).

#### Software Tools

- git.
- GitHub (Actions, Classroom).
- GitLab.
- VSCode, Visual Studio.WSL, Ubuntu, Debian, Windows 10, Mac.
- Docker.

# Engineering Skills

- Design thinking.
- Concept generation & evaluation.
- Prototyping.
- Project planning & management.