



Canberra, 4th November 2025,

To whom it may concern,

This letter is to certify that Mr Thai Binh Nguyen, date of birth: 10/02/1994, has been employed as a full-time Research Associate at UNSW Canberra, School of Engineering and Technology from 01/07/2025 to present. His employment details are as follows:

- Start of employment: 01/07/2025
- Position: Research Associate
- Working hours: 40 hours/week
- Type of employment: Full-time
- Remuneration: \$110,059 per annum plus 17% superannuation

During his employment at UNSW Canberra, Mr Nguyen is responsible for the following main tasks related to the Defence Trailblazer project on Autonomous Adaptive Swarm Intelligence in Unmanned Aerial Systems (UAS):

- Evaluating aeronautical performance characteristics including flight dynamics, propulsion efficiency, and structural design considerations for multirotor aircraft configurations.
- Designing electronic system architecture, assembling and integrating electronic components including flight controllers, GNSS (Global Navigation Satellite System) modules, communication systems, sensors and actuators for UAS platforms.
- Designing and 3D printing mechanical and supporting parts for drone prototyping.
- Designing and developing embedded software for autonomous coordination of unmanned aerial vehicle (UAV) swarms, including flight control algorithms, swarming behaviours, sensor integration, and inter-drone communication protocols.
- Designing and implementing real-time simulation systems for UAS flight testing including software-in-the-loop (SIL) and hardware-in-the-loop (HIL) settings.
- Conducting hardware-software integration, testing and validation of drone avionics systems and embedded control systems.
- Performing flight testing operations and analysing aircraft performance data to optimize autonomous navigation and control systems.
- Establishing testing protocols and safety procedures for indoor flight facility and outdoor field operations of UAS swarms.
- Preparing technical documentation, research reports, and publications.

Mr Nguyen's work demonstrates expertise across software engineering (software and algorithm development), electronics engineering (avionics and embedded system development), and aeronautical engineering (UAS design and flight operations).

If you need further information related to Mr Thai Binh Nguyen's employment at UNSW Canberra, please feel free to contact me.

Regards,

A handwritten signature in black ink, appearing to read 'M Garratt', with a stylized flourish at the end.

Dr Matthew A. Garratt
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