

## JUN JET TAI

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### EXPERIENCE

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#### June 2024 – Present      Research Intern, Sony AI

- Working on pure vision-based [GT Sophy](#).

#### Oct 2023 – May 2024      ML Engineer Contractor, Eluve

- Under NDA for now.

#### Mar 2022 – Jan 2023      Principal Maintainer of [PettingZoo](#) and [SuperSuit](#), [Farama Foundation](#)

- Most downloaded multi agent reinforcement learning libraries, >40k monthly downloads.
- Coordinate with >10 developers to steer library direction, designing APIs for best ease-of-use.
- 60+ PRs contributed, 100+ PRs merged, 30k+ lines of code.
- Also contributed to other libraries – Gymnasium, Gymnasium Robotics, responsible for sparse reward environments in Gymnasium Robotics and domain randomization in Gymnasium.
- Co-authored the Shimmy library – a library for interfacing the PettingZoo and Gymnasium API with other popular reinforcement learning libraries (e.g. DMControl).

#### Mar 2020 – Aug 2020      Simulation Engineer, Swisslog Malaysia Sdn. Bhd.

- Co-developed internal tools for warehouse automation simulation using Emulate3D.
- Trained replacements prior to resignation, left to pursue a PhD.

#### Aug 2018 – Dec 2019      Research Assistant, Taylor's Unmanned Aerial Vehicles Research Group

- Supervised by Dr. Swee King Phang, oversaw induction and training of 5 new members and pilots.
- Developed a novel obstacle avoidance and navigation algorithm for UAVs, 2 papers published.
- Helped develop vision-based target tracking for UAVs using novel Siamese Net inspired architecture.
- Designed custom middleware for UAV using ROS and PX4, allowing 3 other projects to be bootstrapped.

#### Jan 2019 – Mar 2019      Software Engineering Intern, Fourfang Sdn. Bhd.

- Built landing algorithm with bespoke check safes for 5 kg Venus UAV, used in a 24/7, automated infrastructure.

### EDUCATION

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#### 2020 – Present      PhD in Artificial Intelligence and Engineering – Coventry University, UK

Topic: Autonomous AI Enabled Drones for Predictive Maintenance

#### 2016 – 2020      Bachelor of Engineering (Honours) Mechanical Engineering – Taylor's University, Malaysia

CGPA 3.92/4.00

### CORE SKILLS

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- **Deep Learning:** Reinforcement Learning, Computer Vision, Uncertainty Quantification, Generative Modelling
  - **Robotics:** SLAM, Sensor Fusion, Electronics and Mechanical Design, Communication Protocols
  - **Languages and Frameworks:** PyTorch, WandB, Scipy, Pandas, Matplotlib, Numpy, Sklearn, C/C++, C#, Matlab, Go, Rust, Docker, CI/CD, MySQL, MATLAB, PX4, ArduPilot, ROS, Dronekit, Arduino
  - **CAD Software:** SolidWorks, EasyEDA, EagleCAD, Onshape
  - **Linux-based Operating Systems:** Ubuntu, RedHat OSes, Arch btw.

### NOTABLE PROJECTS

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#### [PyFlyt](#) – UAV Flight Simulator for Reinforcement Learning Research

- A library for researching reinforcement learning algorithms on UAVs, > 70k downloads.

#### [CrazyFlyt](#) – Crazyflie 2.x Swarming Controller

- A library for swarming Crazyflie 2.x UAVs with a flexible software/hardware interface, built using PyFlyt.

#### [SAMTool](#) – Semantic Segmentation Dataset Creation Tool

- A tool for rapidly creating semantic segmentation datasets using the Segment Anything Model by Meta.

#### [RIDS](#) – UAV Remote ID Spoofer on ESP8266

- 16 fake UAV Remote IDs in the air all flying in random directions, featured in various [videos](#).

#### [Wingman](#) – A Horizontally Integrated Library for Managing Hundreds of AI experiments At Once

- Automated weights versioning, Weights & Biases integration, hyperparameter organization.
- Logged >18,000 tracked experiments totaling >100,000 hours of AI training in one year.