Curriculum Vitae

TAI JUN JET | Student
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EDUCATION

2016 – Present **Bachelor of Engineering (Honours) Mechanical Engineering**
Taylor's University, Malaysia
2015 – 2016 **South Australian Matriculation**
Taylor's College, Subang Jaya

WORK & RESEARCH EXPERIENCE

Aug 2018 – Present **Taylor's Unmanned Aerial Vehicles Research Group**
- Research Assistant under Dr. Swee King Phang
- Developed Autonomous Obstacle Avoidance and Navigation Algorithm for UAVs
- Aided in development of Artificial Intelligence based vision target tracking for UAVs
- Developed in-depth knowledge about ROS and PX4 systems

Jan 2019 – Mar 2019 **Fourfang Sdn. Bhd.**
- Software Engineer Intern
- Built precision landing algorithm with bespoke procedure and check safes
- Developed in-depth knowledge about Dronekit and ArduPilot systems

Jan 2015 – Dec 2016 **Winanga-Li Community Service**
- Provided tuition courses for underprivileged children ages 9 to 16

RESEARCH INTERESTS

- Unmanned Systems
- Machine Intelligence
- Control Systems

AWARDS AND HONORS

2019 EURECA Conference Best High Impact Research Award
Taylor's University FYP1 Best Poster Award
Semester 7 Dean's List Award
Semester 7 Book Prize Award
2018 Solidworks Intervarsity Competition Runner Up
Semester 5 & 6 Dean's List Award
Semester 5 Book Prize Award
2017 Taylor's Engineering Fair October 2017, 1st Place
Taylor's Engineering Fair July 2017, 3rd Place
Semester 3 & 4 Dean's List Award
Semester 3 & 4 Book Prize Award
2016 Taylor's Tertiary Merit Scholarship, Highest Tier
Taylor's Engineering Fair October 2016, 1st Runner Up
Semester 1 & 2 Dean's List Award

CORE SKILLS

- Firmware Level Software Development (PX4, ArduPilot, ROS, Dronekit , Arduino, Proficient in C/C++)
- Simulation Software (MATLAB, ANSYS, Simulink, Simscape, Gazebo)
- CAD Software (SolidWorks, EasyEDA)
- Linux-based Operating Systems (Ubuntu, Kali Linux)
- Electronic Hardware Development (Avionics, Robotics, PC Hardware)
- Data analysis methods (ANOVA, Taguchi Method, Pearson's Correlation, etc.)

PUBLICATIONS

- Tai, Jun Jet, Swee King Phang, and Choon Lih Hoo. "Application of Steady-State Integral Proportional Integral Controller for Inner Dynamics Control Loop of Multi-rotor UAVs." *2018 Fourth International Conference on Advances in Computing, Communication & Automation (ICACCA)*. IEEE, 2018.
- Lee, Keifer, Jun Jet Tai, and Swee King Phang. "BOBBY2: Buffer Based Robust High-Speed Object Tracking." *arXiv preprint* arXiv:1910.08263 (2019).

NOTABLE PROJECTS

Arduino Platform based CNC knife w/ tangent following blade

- Arduino based benchtop CNC machine with tangent following blade to cut thin material sheets from user defined CAD drawings.

Automated Aircraft Painter

- Small Scale Automated Aircraft Painting Machine that prints user defined images on aircraft surfaces.

Arduino Platform based Quadrotor - Scratch Build

- Complete quadrotor system based on Arduino, original code, and simple off-the-shelf electronics.

Others

- All Weather Quadcopter
- PID Controlled Inverted Pendulum
- Quasi-Passive Exoskeleton

INTERESTS

Taylor's Robotic Club

- Project Development Lead
- Overlooked development of new projects

CDIO Conference Kanazawa, Japan 2018

- Competition Group Leader
- Lead a team of international students in a UAV innovation competition