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| Yeoh Yu Xuan yyeoh002@e.ntu.edu.sg | (+65) 90815284 | | |
| **EDUCATION** | |  |
| **NANYANG TECHNOLOGICAL UNIVERSITY (NTU), SINGAPORE**  **School of Mechanical and Aerospace Engineering** *Bachelor of Engineering (Honours), Aerospace Engineering*   * Honours (Highest Distinction) (expected) * Current GPA: 4.93/5.00 | | Aug 2016 – May 2020 |
| **DELT UNIVERSITY OF TECHNOLOGY**   * Semester Exchange | | Sep 2018 – Jan 2019 |
| **DUNMAN HIGH SCHOOL**  *Singapore-Cambridge GCE (Advanced Level)*   * 7 Distinctions * Rank points: 90/90 (Perfect score) | | Jan 2010 – Dec 2015 |
| **AWARDS** | |  |
| * Dean's List – Aerospace Engineering (Top 5% of cohort) | | 2018 |
| * NTU President Research Scholar | | 2018 |
| * Defence Science and Technology (DSTA) Undergraduate Scholarship | | 2016 |
| * NTU MAE Enrichment Grant | | 2016 |
| * Edusave Award for Achievement, Good Leadership and Service (EAGLES) | | 2015 |
| * Singapore School Sports Council Colours Award | | 2015 |
| * Mountbatten Sports Award | | 2015 |
| **INTERNSHIP EXPERIENCE** | | |
| **DEFENCE SCIENCE AND TECHNOLOGY AGENCY, SINGAPORE** *Intern, UAV* | | Feb 2019 – Jun 2019 |
| * Evaluated various Simultaneous Localization and Mapping (SLAM) methods to determine the most suitable method for real-time positioning with scale recovery. * Implemented a visual-inertial SLAM system on an embedded computer by integrating data from a camera, inertial measurement unit, and flight controller using Robot Operating System (ROS). * Planned and conducted indoor and outdoor trials to compare and analyze the performance of two Visual-Inertial SLAM algorithms in different operating conditions. * Designed and produced 3D printed mount for securely mounting a camera onto a quadcopter. | | |
| **THE BOEING COMPANY, RIDLEY PARK, PA, USA** *Intern, Chinook Stress* | | Jul 2018 – Aug 2018 |
| * Gained a deeper understanding of aircraft structure and design through visits to the shop floor. * Worked closely with senior engineers to learn about the techniques used to ensure airframe structures comply with strength criteria. * Performed force and stress analysis on a Chinook flare dispenser over a period of XX weeks. * Attended meetings between Boeing engineers and Singapore defense engineers to recognize some of the typical issues faced and how they can be resolved. | | |
| **DEFENCE SCIENCE AND TECHNOLOGY AGENCY, SINGAPORE**  *Intern, UAV* | | Jun 2017 – Aug 2017 |
| * Developed an android application which can autonomously control a drone in a distributed drone swarm. * Incorporated a histogram of oriented gradients (HOG) object detector into the android application for real-time object detection. * Created an online database for drones to communicate with each other to avoid collisions and share location of detected objects. | | |
| **ACADEMIC PROJECTS** | |  |
| **ENGINEERING INNOVATION AND DESIGN** | | Jan 2018 – Jun 2018 |
| * Collaborated with 8 other team members to design and develop a prototype for a multi-purpose cleaning device for hard to reach areas. * Conducted a market survey to gauge the popularity of the product and the suitable price range. * Took on the role of a Treasurer and ensured that the team stayed within the project budget and submitted all claims on time. * Obtained A+ grade for the project. | | |
| **URECA UNDERGRADUATE RESEARCH PROGRAMME** | | Aug 2017 – Jun 2018 |
| * Performed analysis of a plane design using XFLR5 to obtain its lift and drag coefficients and ensured that the plane would be stable in flight. * Assembled a 3D printed tilt-rotor UAV and worked on the control of the plane using a Pixhawk flight control system. * Modelled the plane transition from hover to forward flight stage and calculated the forward velocity and thrust required for each rotor using both a simplified approach and a lumped-vortex model. * Designed a poster and presented to judges and peers at the 2018 Discover URECA Poster Competition and won 3rd Place in the Engineering category. * Completed the programme successfully with Distinction. | | |
| **CO-CURRICULAR ACTIVITIES** | |  |
| **NTU TABLE TENNIS VARSITY TEAM**  *Member* | | Dec 2016 – Jan 2020 |
| * Represented the university in the Institute-Varsity-Polytechnic Games (IVP Games) and Singapore University Games (SUniG). * Achieved 2nd Place in the SUniG 17/18 and 3rd Place in IVP 17/18 as a team. | | |
| **NTU MECHANICAL & AEROSPACE ENGINEERING (MAE) CLUB**  *Member, Sports Sub-Committee* | Aug 2016 – May 2017 | |
| * Worked with other sub-committee members to organize a Sports Day in which about 100 people participated in various sports events. Ensured that the event went smoothly according to plan by coming up with event schedule that provided enough buffer time and by giving clear instructions to participants so that there is minimal delay. * Assisted with the publicity for the 2016 Inter-School Games and was in charge of the volleyball team. Organized training sessions for the team members. * Participated in the Inter-School Games table tennis, futsal, basketball and race relay events. Guided the table tennis team to 2nd Place. | | |
| **TECHNICAL SKILLS** | | |
| * Language: English and Mandarin * Programming: C, Python, Java * Software: MATLAB, SolidWorks, XFLR5, ROS, Android Studios, Processing, Microsoft Office | | |