Zwe Lin (David) Htet

Electrical and Computer System Engineering Major

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I am a self-driven electrical engineering student in his final year with a passion for Artificial Intelligence and Robotics. I possess proficient data analytics skills in Python and MATLAB, and am well-versed in Robot Operating System (ROS) for robotics application. I also have a proven track record of working independently and in teams, and consistently delivering professional results on time. My ultimate goal is to bridge the social gap between Humans and Robots and instill socially compliant behavior in robots.

Education

Monash University, Clayton (2016 - Present)
Honors Bachelor of Electrical and Computer Systems Engineering
- Dean's Honors List: 84.146 Weighted Average Mark
- Higher Achiever Award
- Monash Summer Research Scholarship Holder

Sunway University, Malaysia (2015 - 2016)
Monash University Foundation Program
- Jeffery Cheah Entrance Scholarship
- Graduated with 92.75 Weighted Average Mark

Work Experience

Monash University
Research Assistant – Data Collection and Analytics (November 2019 – Present)
- Worked with a novel motion capturing technology using IMUs to collect motion data from elite AFL athletes.
- Performed joint angle estimation with MATLAB, after ensuring data validity and quality.
- Liaised with other researchers to developed questionnaires in Qualtrics to assess elite athletes' states of mind, mood, fatigue, and level of perception.
- Working on a classifier to estimate injury risk by analyzing the movement data and athlete self-reports/diaries.

Monash Nova Rover
Software Engineer (September 2019 – Present)
- Practiced Scrum and Agile Methodologies by facilitating exercises such as sprint meetings to improve workflow and to ensure satisfactory project progress.
- Acquired code organization and tracking skills using GIT.
- Developed and implemented path planning algorithms, such as A*, D* and Bug motion, in ROS1.
- Simulated the rover in a Gazebo environment to test the robustness of path planning algorithms.
- Oversaw radio communication between the rover and the base station of operation.

Real-Time Learning Australia
Robotics Facilitator – Student Mentor (July 2019 – Present)
- Mentored young Australians on the basic coding and robotics skills, and taught the use of Arduinos (computer software).
- Ensured smooth operations of the learning and teaching workshop.

Volunteering Experience

IEEE Monash Student Branch

Events Manager — Monash University (July 2019 - Present)

- Showed a strong understanding of logical matters, in organizing IEEEXtreme – 24-Hour-Programming Competition for the Victorian Section.
- The above and other events involved in creating a schedule and budget and organizing catering.
- Exhibited excellent people skills in liaising on joint event proposals from affiliated partners, and raising awareness on the organization's values and inception.
- Awarded 'Best Student Branch Award' in the Victorian Section.

Digital AI Summit Melbourne

Ushering and Registration — (March 2019)

- Contributed to the running and welcome of smooth information sessions, which helped the whole Summit to run smoothly.
- Trained in event management and organization from Humanitix.
- Gained an appreciation for current state-of-the-art AI technologies and its applications.

Competitions and Personal Projects

Socially Conformant Navigation Behavior for Autonomous Robots in Warehouse Applications

ECSE Final Year Honors Project — Monash University (Feb 2020-Present)

- Developing a socially aware robot using deep reinforcement learning approaches under the supervision of Prof. Elizabeth Croft and Dr. Wesley Chan.
- Created and modeled the warehouse environment in Gaze1bo with pedestrian simulation
- Successfully trained a Deep Q-network to achieve obstacle avoidance and goal-oriented navigation

Anti-Sleep System

Monash University Hardhack — Monash University (March 2019)

- Engineered safety system for drowsy drivers by integrating several sensors that monitors sleepiness.
- Deployed a computer vision method to track eye blinks and yawns.

Byte-by-Byte

Bit by Bit Hackathon — Monash University (August 2019)

- Created an app for Android and IOS which projects food menu items onto Augmented Reality space to increase customers' confidence in the product.
- Learned Swift and Xcode for creating the user interface, and testing and debugging of the IOS app.

Modubrace for Scoliosis Patient

Hippocratic Hackathon — Melbourne University (July 2019)

- Achieved First Place for sustainability, cost-effectiveness, and feasibility, in the integration of Electrical Muscle Stimulation (EMS) into an existing brace design to combat muscle atrophy.

Skills and Interests

Technical Skills	C/C++, MATLAB, Excel, Python, Linux, ROS, GIT
Web & Design	Adobe Photoshop, HTML/CSS
Languages	English; Burmese
Interests	Analog and Digital Electronics, Web Design, Machine Learning, Robotics,