Walter TAY Ann Lee

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EDUCATION

NATIONAL UNIVERSITY OF SINGAPORE (NUS)

BEng in Mechanical Engineering
University Scholars Programme
Cumulative Average Point: 4.35 / 5.00
Expected Graduation: July 2020

BILKENT UNIVERSITY

Student Exchange Programme
Jan. 2019 - May 2019 | Ankara, Turkey

AWARDS

2019 USP Senior Honour Roll
2018 USP Honour Roll
2016 ASEAN Undergraduate Scholarship
2015 Top Scorer of National Chemistry Quiz
2015 Gold Medal for Kangaroo Math Competition Malaysia
2015 Top 95 in National Mathematics Olympiad

COURSEWORK

ENGINEERING

Deep Reinforcement Learning
Finite Elements
Mechatronic Systems
Feedback Control Systems
Materials for Engineers
Manufacturing Processes
Project Management (Microsoft Project)

SCHOLARS PROGRAMME

Quantum Computation
Language, Cognition, and Culture
Mathematics and Reality
Brain and Behaviour
Cultures, Civilizations, and Ideas
War and Democracy
Issues In and Around Justice

SKILLS

PROGRAMMING

Python • TensorFlow • Arduino • MATLAB • fastai • C • Excel VBA

LANGUAGES

English (Fluent) • Malay (Intermediate) • Chinese (Intermediate)

INTERESTS

Meeting new people • weightlifting • bartending • reading • video games

PROJECTS

DEEP REINFORCEMENT LEARNING FOR MAPLESS NAVIGATION | Final Year Project

Aug 2019 – Current | Singapore
Trained neural networks for mapless navigation in a simulation and transferred the networks to a real robot (TurtleBot2) for testing under the supervision of **Dr. Zhang Yunfeng** . Tools and libraries used include Tensorflow, Gazebo, ROS Stage, OpenAI Gym, and OpenAI SpinningUp.

AUTOMATED MOBILE GANGWAY | PSA Marine Project

Aug 2019 – December 2019 | Singapore
Designed, constructed, and troubleshooted a compact and reliable electrical and software system for an **Automated Mobile Gangway** under the supervision of **Dr. Peter Chen**.

FINITE ELEMENT PACKAGE DESIGN | Group Project

Jan 2019 – May 2019 | Ankara, Turkey
Designed a **mini-FE package** in MATLAB to study the displacement, strain, and stress distribution for a two-dimensional rectangular domain with a circular void in the middle under the supervision of **Dr. Ali Javili**.

EXPERIENCE

ROBERT BOSCH SEA PTE LTD | Corporate Research Intern

July 2018 - Dec 2018 | Singapore

- Automated the analysis of IoT testbench experiment data, saving 5 hours of work time per day
- Developed hardware for evaluating commercially available sensors (i.e. pressure/ultrasonic/TVOC/TOF sensors) using Arduino
- Conducted experiments to study sensor output from filters at different contamination levels and recommended the most promising sensing principle under the supervision of **Dr. Soon Hwee Ping**.

UNIVERSITY SCHOLARS PROGRAMME | Student

Aug 2016 – Current | Singapore

- Implemented Grover's (1996) Quantum Search Algorithm using IBM's quantum computer
- Conducted statistical testing of the Democratic Peace Theory with a logistic regression model of war data
- Collected data to study the relationship between linguistic relativity and working memory perception
- Dissected a brain and explored a physiological approach to the study of human consciousness.

CULTURAL ACTIVITIES CLUB | Social and Welfare Director

Aug 2017 – Aug 2018 | Singapore

- Directed internal projects within the Cultural Activities Club (CAC) such as CAC's Appreciation Night 2018 and CAC's Annual Retreat leading to greater bonding between CAC's 12 Sub-Clubs.
- Performer and breakdancer of CAC+US 2018/2017 (NUS CAC's largest annual music and dance concert), Infusion 2018, and Ascendance 2017
- Emcee for 9 major NUS events: NUSSU Student Life Fair 2017, USP Exchange Student Events 2017/2016, CAC Appreciation Night 2017/2018, CAC Annual Retreat 2016/2017, MSL Appreciation Night 2016/2017.