

LU SICHENG, ISABELLA

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EDUCATION

National University of Singapore

Aug 2020 - Present

Bachelor of Engineering (Honours) in Computer Engineering

- Relevant coursework: Computer Architecture, Computer Networks, Transistor-level Digital Circuits, Digital Signal and Systems, Data Structures and Algorithms, Fuzzy/Neural Systems for Intelligent Robotics
- President of faculty Student Council and Champion of the 2022 RoboSub Autonomy Challenge
- Expected Date of Graduation: May 2024

Hwa Chong Institution

Aug 2018 - Aug 2020

Science Stream

- GCE A'Level : AAA/A

WORK EXPERIENCE

Digital Innovation Intern, Airbus Singapore

Jan 2023 - Present

- Conducted experiments for Object detection, Computer Vision and Flight Path design on drone with Python, OpenCV and YOLOv8
- Acquired extensive knowledge in aircraft operation and maintenance knowledge through in-depth immersion on Airbus' Skywise platform and innovation projects
- Designed and developed a full-stack Dashboard on Skywise with JS, SaaS and HTML, resulting in improved data visualisation and decision-making capabilities for innovation team

Teaching Assistant, CS1010 Programming Methodology , NUS

Aug 2022 - Dec 2022

- Conducted weekly lab and consultation sessions on C programming fundamentals for 20 undergraduate students
- Evaluated student coding assignments, provided constructive feedback, and answered questions to enhance student learning and understanding of C programming

Europe Industrial Lighting Product Intern, OPPLE Lighting

Dec 2019 - Feb 2020

- Orchestrated R&D workflows and monitored manufacture process; Oversaw product testing and evaluation to identify areas for improvement and optimize product performance
- Gained a comprehensive understanding of EU lighting product regulations for industrial floodlights, downlights, and spotlights, ensuring product compliance with relevant regulations and standards

PROJECT EXPERIENCE

Embedded Developer, Bumblebee Autonomous System

Aug 2021 - Present

- Built and maintained electrical components for award-winning autonomous marine robotics systems as part of a 30-member team; integrated a range of sensors, including military-grade sonar, GPS, IMU, LiDAR, DVL, Altimeter, and FLIR
- Configured and calibrated underwater sensors, propulsion and actuation, represented Singapore and achieved Championship in the RoboSub 2022 Autonomy Challenge held in Washington, DC, demonstrating exceptional skills in building Autonomous Underwater Vehicles (AUVs)
- Executed real-time testing to verify effectiveness of control systems, enhancing accuracy and efficiency of autonomous surface vessel(ASV) and unmanned aerial vehicle(UAV), achieved First Runner Up position in RobotX Maritime Challenge 2022

External Communication, CEG Capstone Project

Aug 2022 - Nov 2022

- Established an encrypted and multi-channelled wireless communication system for a project; set up multithreaded TCP/IP sockets, two-hop SSH tunnels and MQTT communication using Python and C#

Team Lead, Alex Search and Rescue Robot

Feb 2021 - Jun 2021

- Developed a low-cost ROS-based remote controlled robot equipped with SLAM, colour sensing, and obstacle avoidance capabilities for effective search and rescue operations

CO-CURRICULAR ACTIVITIES

President, ECE 8th Undergraduate Student Council**Jun 2021 - Jun 2022**

- Managed a team of 36 Electrical & Computer Engineering (ECE) cohort representatives, student leaders, club presidents and scholars
- Liaised with 30+ companies, including DSTA, Micron and Huawei, for the 2022 ECE Career Fair
- Awarded Certificate of Service-Distinction (AY20/21) for an outstanding role as cohort representative

President, NUS Chinese Calligraphy Club**May 2021 - May 2022**

- Planned and arranged weekly training sessions to promote Chinese Calligraphy and Chinese Culture in Singapore

ADDITIONAL INFORMATION

- Language: Chinese (Native), English (Fluent), French (Basic)
- Technical: C | C++ | Java | HTML/CSS | Verilog | Assembly | Python | MATLAB
- Work Authorisation: China (Citizen), Singapore (Permanent Resident)