MUSTAFA ANIS HUSSAIN

+65 9040 4352 • mustafahussain793@gmail.com
• mustafa.ah@u.nus.edu

PROFILE

Currently a third-year student at the National University of Singapore pursuing a Bachelors in Computer Engineering. My interest in hardware and software systems has spurred me on to study and work in this inter-disciplinary field and gain a deeper understanding into computing systems. I am always eager to gain valuable experience in similar or related fields.

EDUCATION

National University of Singapore (NUS)   **August 2021 - May 2025**
Bachelor of Engineering (Computer Engineering)
- Pursuing a B. Eng. in Computer Engineering (jointly offered by School of Computing & College of Design and Engineering) intending to specialise in IoT (Internet of Things)
- Member of NUS IEEE Student Branch, Cricket Team
- Relevant Coursework: Programming Methodology, Computer Engineering Principles and Practices, Discrete Structures, Data Structures and Algorithms, Software Engineering, Linear Algebra, Machine Learning, Database Systems, Computer Networks, Operating Systems

Raffles Institution   **2013 - 2018**
Raffles Diploma & A Levels
- Recipient of Gifted Education scholarship awarded to ~1% of all students
- Graduated with Raffles Diploma with Merit in the Sports & Health and Character & Leadership domains
- Captain of Cricket Team (2017-18) and Deputy Head of Moor House (2015-16)

WORK EXPERIENCE

Curium   **May 2023 – October 2023**
Software Engineering Intern
- Built an online interactive software to help clients visualise calibrated sensor data in a 3D space by leveraging the company's proprietary static and dynamic sensor calibration technologies
  - Front-end development using React and Three.js, Back-end development using Django and GraphQL, Cloud deployment using AWS S3, EC2, EB
  - Implemented multiple user-controlled features like frame-by-frame animation, rotation and translation control, 3D controls
- Assisted in a machine learning project aimed at performing live motion tracking of humans using multiple LiDAR sensors
  - Built the pipeline in ROS environment (nodes, packages, launch files) to facilitate live fusion and tracking
  - Performed set-up, calibration and transformation of LiDAR sensors to be used for the tracking
  - Fine-tuned model and improved tracking performance

Technology Centre for Offshore and Marine Singapore (TCOMS)   **March 2021 – June 2021**
Technology Intern
- Experienced research setting comparing and testing various networks and communication protocols (e.g. LoRaWAN, Zigbee, Bluetooth etc.) for wireless real-time data acquisition in model basin

- Conducted an experimental study on multiple resistive wave probes to determine relation between water level and current reading for use in commercial ocean basin
  - Determined best conditions and parameters to achieve linearity between output voltage/current of the wave probes and water height
- Assisted in ad-hoc workshop duties
  - Cutting and assembling of prototypes used in ocean basin
  - Wrote Operation Documentation and Risk Assessment for some tools in the workshop

Work Attachment at National Institute of Education (NIE)   **July 2016 – August 2016**
Intern
- Conducted an in-depth literature review on neuroscience for use by NIE CRPP Director
- Wrote a paper titled "Neuroscience and Lifelong Learning" in line with the CRPP focus on applicability of neuroscience in learning contexts

PROJECTS
___

- Built a recommendation Machine Learning model for insurance policies as a Finalist in NUS Fintech Month Hackathon 2023 managed by NUS Fintech Society (Python, scikit-learn)
- Built a patient-doctor matching portal for NUS Hack4Good 2023 organised by Google Students' Developer Club (HTML, PHP, MySQL)
- Participated in the NUS-Grab Data Analytics Competition 2022 organised by NUS Statistics Society

SKILLS
___

- Proficient in C/C++, Java and other OOP Languages, Software Engineering Practices etc.
- Proficient in building full-stack applications using various frontend (React, JS) and backend (Django, Express, Flask) frameworks, RESTful APIs etc.
- Proficient in SQL and other related database systems for data management
- Proficient in Robotic Operating System (ROS) for use in multiple environments
- Familiarity with deployment of applications on the cloud (Worked with AWS S3, EC2, Elastic Beanstalk & Vercel)
- Familiarity with Machine Learning concepts and basics with particular interest in NLP

COURSES
___

- Hackwagon DS101 - Gained an introduction to Python programming, studying about various data types and structures. Leveraged real-world data to perform basic data analytics using Python functions and iterations. Completed a final project applying Programming into Analytics with Lazada as a Case Study
- Tertiary Infotech Machine Learning Course - Built upon above experience to comprehend basic Machine Learning and Deep Learning Concepts. Used TensorFlow and Keras to implement code for Conventional and Recurrent Neural Networks