

# MUHAMMAD ASHRAF BIN MOHAMAD JAFFAR

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## EDUCATION

### National University of Singapore

Aug 2020 - Present

#### Bachelor of Engineering: Computer Engineering (Honours)

- Relevant Courses: Robotics, Data Structures and Algorithms, Transistor-Level Digital Circuits, Computer Organisation, Software Engineering, Real-Time OS, Computer and Wireless Networking, Interaction Design, Human-Computer Interaction Theories, Design for VR / AR

### Stanford University

Sep 2022 - Dec 2022

#### Management Science & Engineering (Exchange Student)

- Relevant Courses: The Spirit of Entrepreneurship, Entrepreneurial Thought Leader Seminar

## WORK EXPERIENCE

### Software Engineer Intern, LEADOPTIK (MedTech Startup in Silicon Valley USA)

Aug 2022 - Jul 2023

- Built automation software on Qt with Python /C++ for lens characterization, hardware bench-testing, laser characterization and shortening 2-3 hours of labour to a few minutes
- Fostered hardware development including decision-making on components to use, circuit design, building and testing of hardware
- Programmed Python scripts and image detection scripts with OpenCV for data analysis on results collected from sensors and probes during tests
- Designed and implemented a new UI for medical device prototype

### Product Management Intern, SGInnovate

May 2021 - Aug 2021

- Designed new UI for in-house talent acquisition platform (STARS)
- Evaluated features of platform based on user feedback and develop recommendations for improvement
- Programmed Python scripts to evaluate talent scores depending on experiences and education
- Crafted a 70-page in-depth guide for new hires to use in-house talent acquisition platform

### Project Coordinator Intern, SGInnovate

Feb 2020 - Jun 2020

- Coordinated the Summation Programme, an apprenticeship bridging Deep Tech Startups with students globally
- Collaborated with over dozens of Deep Tech startup founders in organising and short-listing close to 50 talents from 1200 applicants
- Planned development and updates to improve user experience of in-house talent acquisition platform

## ACADEMIC PROJECTS

### Hardware Sensors Lead, Capstone Laser Tag

Aug 2023 - Nov 2023

- Built hardware components for a 2-player laser tag game consisting of a vest, gun and glove within 3 weeks
- Decide sensors to purchase and integrate on each component (Bluno Beetles as microcontrollers, IR sensors for shooting, IMU to detect hand gestures and motion, etc.)
- Oversee maintenance of hardware components throughout testing and game play

### UI/UX Designer, Veil

Aug 2023 - Nov 2023

- Conducted full double diamond design thinking process from confirming problem to ideation to prototype for a wedding planning application
- Engaged in iterative prototyping and tested various design concepts to refine and improve features
- Produced high-fidelity prototypes using industry-standard design tools

### Software Engineer, ConTech

Aug 2021 - Nov 2021

- Developed a command line application in Java to manage computing-related contacts with 4 other groupmates
- Adopted Agile Methodology with 3 sprint periods from creating user stories to developing features and conducting proper testing
- Led development of 'view' and 'help' features while also implementing duplicate checker for contacts

### Robotics Engineer, Alex (Search and Rescue Robot)

Jan 2021 - May 2021

- Created a remotely-operated search and rescue robot able to receive commands from and transmit information to a relay node
- Set up ROS on Raspberry PI on robot and Hector SLAM as a visualisation package to draw out a map from scans made by LiDAR

## EXTRA CURRICULAR ACTIVITIES

### Head of Startup Global, Vice President of NUS Entrepreneurship Society (NES)

Jul 2021 - May 2022

- Managed team of 35 to prepare NES' annual flagship conference, UNICON 2022, hosting over 50 speakers to share journey in entrepreneurship to aspiring entrepreneurs
- Directed Marketing and Sales teams to double sign ups from 424 in 2021 to 829 in 2022

## SKILLS

- Languages: English (Native), Bahasa Melayu (Native)
- Technical: C, C++, Python, Numpy, Pandas, CSV, Java, Qt, OpenCV, TensorFlow, ROS, SLAM, Verilog, Assembly Language, Microsoft Office Suite (Word, PowerPoint, and Excel)
- Creative: Figma, Adobe Creative Suite (Photoshop, XD, Illustrator, Lightroom, Premiere), Canva, iMovie