

# TAN SONG YUN

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## PROFESSIONAL EXPERIENCE

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**Software Engineer and Machine Learning Intern**, DSO National Laboratories May 2021 – Jul 2021

- Enhanced and adapted deep-learning models from erroneous baseline models to identify and remove text cleanly from images using OpenCV, Tensorflow, PIL
- Received strong recognition from staff, who subsequently integrated improvements into other department projects
- Programmed a web-based application that deploys the models, displays images from a database along with an intuitive front-end editor to dynamically modify text on images using Vue.js, Quasar, HTML Canvas
- Collaborated effectively in a self-organizing team of 3 by communicating ideas and translating them into solutions

**Full-Stack Software Engineer Intern**, Yoozoo Games May 2020 – Jul 2020

- Developed a robust AI receptionist chatbot with 10 functions using Rasa and Python under a tight deadline
- Built an interactive chatbot user interface with Speech-to-Text/Text-to-Speech capabilities for prospective MNC clients and internal projects using React.js, Node.js, HTML, CSS, Flask, Postman, Azure Cloud Services

**App Development Intern**, Defence Science Technology Agency (DSTA) Jan 2019 – Mar 2019

- Programmed an Android application targeting Wi-Fi vulnerability using Java and XML on Android Studio
- Utilized location services to reduce risk of Wi-Fi exploits by hackers, especially when complimentary Wi-Fi services are provided by public agencies and protection measures are generally neglected

## ACADEMIC QUALIFICATIONS

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**Nanyang Technological University (NTU)**, Renaissance Engineering Programme Aug 2019 – Dec 2023

- Bachelor of Engineering Science (Computer Science) and Master of Science in Technology Management
- Renaissance Engineering Programme (REP) Scholarship
- CGPA of 4.74/5.0

**Hwa Chong Institution (Junior College)** Jan 2017 – Dec 2018

- GCE 'A' levels with 6 Distinctions and University Admission Points of 88.75/90
- Hwa Chong Diploma with Merit, Edusave Entrance Scholarships for Independent Schools (EESIS)

## CO-CURRICULAR ACTIVITIES

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**Project Lead**, REP Humanitarian Engineers and Leaders (HEAL) Sep 2019 – Sep 2021

- Led a team of 9 to engineer an energy and cost-efficient machine that generates purified water from atmospheric humidity, aiming to make a meaningful impact on less-privileged overseas communities
- Pioneered the project and inspired team to share ideas, while making crucial decisions on project direction
- Established new partnerships with a venture capital firm and team of academics

**Chair of Cultural Night**, NTU Tanjong Hall of Residences Sep 2019 – Sep 2020

- Planned a concert with a 6000 dollars budget while directing numerous meetings with hall captains
- Organized many other events concurrently, including a university-wide dance competition involving over 600 dancers
- Handled uncertainty and adapted well amidst the COVID-19 situation by revamping into an online event

## RELEVANT SKILLS

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**Languages:** English (Native), Chinese (Full Professional Proficiency)

**Programming Languages:** Python, JavaScript, Java, C, C++, HTML, CSS, R, SQL, XML

**Libraries/Frameworks:** React.js, Node.js, Vue.js, Pandas, dplyr, Flask, Quasar, Rasa, OpenCV, Tensorflow, PIL

**Projects/Hackathons:** Course Registration System, Shopee Code League 2020, GovTech Stack the Flag 2020

## OTHER NOTABLE EXPERIENCES

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- Group Leader, NTU Tanjong Hall Orientation Camp (2020)
- Medical Affairs Intern, Novartis Oncology (2019)