Naaman **Tan**

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EXPERIENCE

DSO National Laboratories **May 2021 – Aug 2021**

Machine Learning Engineer Intern

- Responsible for end-to-end research and development of deep learning workflows and network architectures for a synthetic aperture radar (SAR) image processing task that only has 3 instances of literature.
- Designed and implemented various deep learning architectures in TensorFlow 2.0 based on image segmentation, image super-resolution and image-to-image translation techniques.
- Creatively used a multi-task learning approach to develop a network that achieves SOTA performance with 15x less data.
- Optimised radar signal simulator with CUDA GPU acceleration and algorithm redesign. Speed ups up to 700x.
- Heavy exposure to data science libraries like (e.g. pandas, sklearn) and software engineering tools (e.g. Docker, Git), as well as literature on latest computer vision deep learning architectures.

Nyx Intelligence **Jun 2020 – Jul 2020**

Part-time software engineering intern

- Successfully developed a web application as POC for larger scale automation for government board.
- Used ASP.NET MVC4, Vue JS. Webapp leveraged Entity framework (EF) Core by using Visual Studio.

SKILLS & PROJECTS

Languages: R, Python, C/C++, Java, JavaScript, HTML, CSS, PostgreSQL

Libraries/Frameworks: TensorFlow, PyTorch, OpenCV, scikit-learn, pandas, React, Node.js, Bootstrap, Vue

Tools: Git, LaTeX, Docker, VS Code, JupyterLab, Tableau, Adobe Creative Cloud

Featured Projects:

Oxford Map The System Competition 2021 **Jan 2021 – Jun 2021**

Team Lead

- Led an interdisciplinary team of five to 2nd place at global finals, after winning national finals.
- Guided by Oxford Said Business School, used a system thinking approach to study how institutional meritocracy might exacerbate social inequality, drafting a 21-page research and recommendation report.

DJI RoboMasters Robotics Competition **Jul 2020 – May 2021**

Project Manager (Standard Robot) | NUS RoboMasters

- Team placed 4th globally (1st in SEA) for RoboMasters University Championship Online Competition.
- Led a team of five in designing three semi-autonomous Standard Robots for 2021 DJI RoboMaster Competition.
- Spearheaded mechanical design and implemented cascade classifier algorithms and R-CNN models for object detection.
- Two of three robots were fully functional and competitive in its capabilities.

Asian Development Bank #DigitalAgainstCOVID-19 Hackathon, Digitizing Waste **Jun 2020 – Aug 2020**

Team Lead

- Led a multidisciplinary team of four to a top 10 place as the youngest finalist among 140+ international teams.
- Designed a novel recycling solution through a mobile app built on machine learning and p2p services.
- Implemented a waste classification model based on MobileNet in TensorFlow 2.0 as a prototype.
- Designed and built a UI/UX wireframe with Figma and Adobe XD to demonstrate for our pitch.

EDUCATION

National University of Singapore **2019-2024**

Bachelor of Computing in Computer Science (CAP: 4.93/5.00), Dean's List

Bachelor of Social Science in Economics (CAP: 4.86/5.00)

University Scholars Programme & NUS Merit Scholarship

Relevant coursework: Data Structures and Algorithms, Machine Learning, Parallel Programming, Database systems

CERTIFICATIONS & COURSES

CS50's Introduction to Artificial Intelligence (Python), Harvard University EdX **Dec 2020**