Royce Teng

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●https://github.com/sleepreap

EDUCATION

Nanyang Technological University, Singapore   **Aug 2021 - Present**
Bachelor of Engineering (Computer Science) With a Second Major in Business

Relevant Coursework/Modules Taken
- Programming fundamentals in Python and C, Data Structure and Algorithm Analysis, Databases, Software Engineering, Data Science and Artificial Intelligence, Deep Learning and Neural Networks

ACADEMIC PROJECTS

Nanyang Technological University, Singapore

Title: Object Detection SegFormer For Football   **Jun 2024 - July 2024**
- Finetuned YoloV8 model on a custom football dataset to perform object detection of four classes of objects, Ball, Referee, Football players, and Goalkeepers.
- The model will output the class, confidence score and bounding boxes for each object detected.
- The model is able to perform inference on images as well as videos.

Title: SegFormer For Semantic Segmentation   **Jan 2024 - Mar 2024**
- Finetuned a deep learning semantic segmentation model using Pytorch Lightning on a custom hardware dataset.
- Integrated Data Augmentation onto the dataset for a more robust semantic segmentation model
- Achieved Mean-Iou score of 0.912 for the performance of the SegFormer model

Title: Image Captioning Deep Learning Model   **Aug 2023 - Dec 2023**
- Developed deep learning model using CNN encoder and LTSM decoder to perform image captioning on COCO2017 Dataset
- Integrated "Soft attention" as well as beam search into the image captioning process in the decoder
- Achieved a BLEU score of 0.112 for the performance of our image captioning model

Title: Job Hosting Web Application Using MERN-Stack   **Aug 2023 - Dec 2023**
- Developed a web application using React that allows employers to post, edit and edit job listings, and employees to apply on the website
- Incorporated Google Maps that display location pins for all the job postings available
- Implemented real time API that displays the number of taxis available at the location of job postings

Title: MOBLIMA   **Aug 2022 - Dec 2022**
- Implemented an application to computerize online booking processes and purchase of Movie tickets, listing of Movies and sale reporting.
- Created a comprehensive application with similar interface and functions as current Movie booking websites

INTERNSHIP AND WORK EXPERIENCE

Temasek Laboratories @ NTU , Singapore   **Jan 2024 - May 2024**
Software Engineer, Intern
- Worked closely with Research Science in developing deep learning models for hardware security
- Finetuned four state-of-the-art semantic segmentation models for on a custom hardware dataset. The models are SegFormer, Mask2Former, DinoV2 and DiNAT.
- Integrated Data Augmentation onto the dataset, as well as created custom evaluation for the performance of the four models on the custom hardware dataset.
- For the best performing model, Mask2Former, the model achieved Mean-Iou score of 0.912

Sunningdale Tech, Singapore   **Feb 2022 - May 2022**
Operator (Part-Time)
- Facilitated in operating of production machines for day-to-day operations
- Facilitated in packing and labelling of machine parts so delivery of required machine parts are met
- Established peer-to-peer learning by teaching and leading less experienced teammates on operating production machines

COMMUNITY SERVICE

International Migrant's Day   **Jun 2017 - Dec 2017**
Game Master
- Organised and hosted an event for more than 300 migrant workers through collaborations with Migrant Workers Centre
- Lead a group of five in designing booth games and setting up of booth
- Lead a group of 5 on educating migrant workers on what is work safety and how to spot unsafe work practices through booth games

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SG Secure Campaign   **Jun 2017 - Dec 2017**
Member

- Hosted an event for more than 300 migrant workers in Little India through collaborations with Migrant Workers Centre
- Educate migrant workers on how to identify threats and emergencies, as well as how to use SGSecure App to report such incidents

SKILLS

- Languages: English (1st Language), Chinese (2nd Language)
- Programming: Python, Java, JavaScript, React, Three.js
- Software Applications and Frameworks: Microsoft Office PowerPoint 2019, Photoshop, After Effects, UiPath

HOBBIES & INTERESTS

Travelling, Sports (Football, Badminton)