Quan Teng Foong

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EDUCATION

National University of Singapore *Aug 2020 – May 2024*

Bachelor of Computing in Computer Science, Honours

- Final year student
- Focus area in Artificial Intelligence and Software Engineering
- Relevant courses: *Data Structures, Design and Analysis of Algorithms, Software Engineering on Modern Application Platforms, Computer Networks, Machine Learning, Natural Language Processing*
- Member of NUS Canoe Sprint

WORK EXPERIENCE

Robot Navigation Intern *May 2022 – Oct 2022*

Continental Automotive

- Designed and executed experiments to investigate the effectiveness of Visual Simultaneous Localisation and Mapping(vSLAM) algorithms on Continental's last-mile delivery robot, Corriere
- Recorded and analyzed data to evaluate the usefulness of vSLAM algorithms that utilise 3D Computer Vision
- Debugged and improved ROS packages to accelerate data collection process

Teaching Assistant (Programming Methodology) *Aug 2021 – Nov 2021*

National University of Singapore

- Led 12 tutorial sessions over the course of the semester for Computer Science freshmen
- Helped to cement students' understanding of programming and computational problem solving
- Graded and provided feedback on weekly programming assignments
- Provided consultation sessions outside of class
- Teacher rating: 4.7/5.0 (dept. average: 4.2/5.0)

PROJECTS

CSPSwift [GitHub] *Apr 2023 – Jul 2023*

A Constraint Satisfaction Problem (CSP) solver package written in Swift

- Improved upon the speed of the basic backtracking algorithm using the AC-3 algorithm
- Utilised Software Engineering patterns to improve code reusability

Fake News Detection [GitHub] [Report] *Mar 2023 – Apr 2023*

Machine Learning models to label instances of fake news

- Explored several syntactic and semantic features
- Compared the Multinomial Naïve Bayes model to BERT (using TensorFlow)

Tumbling Towers [GitHub] *Mar 2023 – Apr 2023*

A recreation of the popular game, Tricky Towers

- A physics-based block stacking game for iPad, coded in Swift
- Employed numerous Software Engineering patterns to increase extensibility and modularization of code
- Achieved 2nd place at the NUS School of Computing Term Project Showcase (STePS)

Carousell Scraper [GitHub] *Aug 2022 – Oct 2022*

A web scraper with a telegram bot frontend for the online second-hand market, Carousell

- Processed HTML webpage using BeautifulSoup4
- Deployed on Telegram using python-telegram-bot
- Executed on a Raspberry Pi 2, repeatedly looping using crontab

Middle Juncture [GitHub] *Jul 2022 – Aug 2022*

Apple's Center Stage, for Linux

- Processed images with OpenCV
- Implemented facial recognition using dlib with GPU support

Hard Disk Predictive Maintenance [Github] [Report] *Feb 2022 – May 2022*

Several Machine Learning models with the goal of predicting hard disk failure

- Investigated the efficacy of modern-day Machine Learning models
- Experimented with over/under-sampling methods to further improve prediction
- Improved feature selection using LIME

TECHNICAL SKILLS

Programming Languages: C, Python, Java, HTML/CSS, Swift
Frameworks: Django, NumPy, Pandas, StoryBoard, sklearn, OpenCV, TensorFlow
Developer Tools: Git, Docker, Robot Operating System
Others: Computer-Aided Design, 3D Printing, Arduino