LEONG SHEU XIANG

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EDUCATION

National University of Singapore **Aug 2018 – Present**

Bachelor of Computing (Honours), Computer Science CAP: 4.48 / 5

Expected Graduation Date: May 2022

SKILLS

- **Programming Languages**: Java, Python, Dart, C, C++, Typescript, Elm, Rust
- **Frameworks**: Flutter, React Native
- **Database**: PostgreSQL
- Focus area in Artificial Intelligence
    - Computer Vision and Pattern Recognition
    - Natural Language Processing

CURRENT INTERESTS

- Extremely excited to see new developments and research in the blockchain space
- Love to delve more into functional programming
- Hoping that Javascript is deprecated in favour of WASM
- Waiting for Flutter ecosystem to mature

PROJECTS

SwimmerPen

Technologies/framework used: Typescript, React Native **July 2021 – Present**

- Prototype a swim race annotation app to speed up extraction of key swimmer biomechanics data
- Use of ffmpeg to enable more accurate timestamp annotations
- Testing of app with end-users to improve user interface and user experience

Static Program Analyser (SPA) for SIMPLE Language

Technologies/framework used: C++, PlantUML **August 2021 – Nov 2021**

- The program takes in an input SIMPLE program (pseudo language), analyses it and thereafter, can be queried in a PQL language (similar to SQL)
- Designed a processor that
    - Constructs an Abstract Syntax Tree (AST) based on the SIMPLE program
    - Uses OOP to aid addition of new grammar rules with little boilerplate code
- Designed a PQL optimiser that reorders a query to reduce computation time

Plan²travel

Technologies used: Java, PlantUML **Oct 2019 – Nov 2019**

- Easy to use offline travel planning application with a command line interface to help travellers plan their journey
- Designed autocompletion capabilities and user interface to enhance user experience
- Used PlantUML to draw UML diagrams for the developer guide
- Reviewed peers' pull requests to highlight areas of improvements and contributed to overall code quality

Spoilers Alert

Technologies used: Javascript, HTML, CSS **May 2019 – Aug 2019**

- As part of the NUS Orbital program (Independent Software Development Project)
- Developed a Firefox and Chrome addon to censor spoilers which would give people more confidence when browsing the web

WORK EXPERIENCE

NLP Research at DSO National Laboratories

Technologies used: Python, pytorch, tensorflow, pandas **Jan 2021 – Jun 2021**

- Worked on improving coreference resolution performance on social media
- Explored different pretraining techniques to address the lack of training data in the task
- Improved average F1 score of 63.5 on the Reddit genre of Georgetown University Multilayer (GUM) corpus to 65.5