Le Nguyen Phong

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EDUCATION

Yale-NUS College   Aug 2020 – May 2024 (Expected)
Bachelor of Science with Honours   Singapore
- Intended Major: Mathematical, Computational and Statistical Sciences.
- Current CAP: 4.65 out of 5.
- Recipient of the Yale-NUS Donor Study Award and MOE Tuition Grant.

SKILLS

Programming Languages: *(Proficient):* Python, C/C++, *(Familiar):* Javascript, OCaml, R.

Technologies: Git, GitHub, React, AWS (Route 53, S3, CloudFront), MySQL, Linux (Ubuntu), GTK, Arduino.

Languages: *(Fluent):* English, French, Vietnamese, *(Beginner):* German.

EXPERIENCE

Olsen Lab – Lab Monitoring Software   May 2021 – Present
Student Researcher   Singapore
- Set up a Raspberry Pi based monitoring system to observe conditions in Olsen Lab of Yale-NUS College for studying quantum phases of ultracold atomic gases; collected over 5 million data points to date.
- Restructured the lab MySQL server and set up a backup system to prevent duplicate and missing data points.
- Wrote a Python app with a GUI to retrieve and visualise data from the lab MySQL server in real time, with features such as data subsampling.
- *Technologies:* Python, Matplotlib, GTK, MySQL, Raspberry Pi, Linux.

go-cart.io – Topology Aware Cartogram Generator Software   December 2020 – Present
Student Researcher   Singapore
- Implemented algorithms to eliminate topology errors when generating cartograms, such as strategically densifying map borders and projecting coordinates through triangulating map grid cells.
- Tested and debugged code on various maps, added handling for floating point errors and edge cases.
- Tested and worked with C/C++ geometry libraries such as CGAL and GEOS.
- *Technologies:* C/C++, CGAL, Linux.

PROJECTS

Personal Website   December 2021
https://lenguyenphong.com – https://github.com/phongulus/personal-website   Singapore
- Built a responsive personal website using React.
- Deployed website with AWS S3 and CloudFront.

Data Transmission with Visible Light   2019
https://github.com/phongulus/light-messenger   Hanoi, Vietnam
- Built a pair of Arduino-based transceivers capable of transmitting text messages by blinking a white LED.
- Devised a communication protocol for data transfer.
- Designed and soldered transmitter and receiver circuits.

EXTRACURRICULARS

Yale-NUS Undergraduate Journal   April 2021 – Present
Co-Editor-in-Chief   Singapore
- Leading a team of 13 editors and 8 authors from both Yale-NUS and NUS, coordinating preparation for publication of Volume 5 in March 2022.
- Led a workshop aimed at teaching editors academic citation styles and citation software.