Le Nguyen Phong

https://lenguyenphong.com | https://github.com/phongulus | +65 8770 6585 | phongnguyen.le@u.yale-nus.edu.sg

EDUCATION

Yale-NUS College   **Singapore**
Bachelor of Science with Honours (current CAP: 4.65)   **Aug 2020 – May 2024 (Expected)**
- Recipient of the Yale-NUS Donor Study Award and MOE Tuition Grant.
- Coursework: YCC1122 Quantitative Reasoning, YSC1212 Introduction to Computer Science, YSC2209 Proof, YSC2232 Linear Algebra, YSC2227 C: A Language For Science And Engineering.

Lycée Français Alexandre Yersin   **Hanoi, Vietnam**
French Baccalaureate, Science Stream, Highest Honours (Score 20/20)   **Sept 2017 - July 2020**
- Awarded the AEFE Excellence-Major Scholarship, a French government scholarship covering tuition and living expenses for 5 years of higher studies in France. Refused scholarship to go to Yale-NUS College.

EXPERIENCE

Olsen Lab – Lab Monitoring Software   **Singapore**
Student Researcher   **May 2021 – Present**
- Set up a monitoring system to observe conditions in Olsen Lab of Yale-NUS College; collected over 5 million data points to date.
- Restructured the lab MySQL database and set up a backup system to prevent duplicate and missing data points.
- Wrote a Python app with a GUI that allows lab researchers to retrieve data from the MySQL server and visualise them via graphs, with features such as plotting multiple measurement units and data subsampling.
- <u>Technologies:</u> Python, Matplotlib, GTK, MySQL, Raspberry Pi.

go-cart.io – Topology Aware Cartogram Generator Software   **Singapore**
Student Researcher   **December 2020 - Present**
- Implemented algorithms to avoid topology errors, such as strategically densifying map borders, and projecting map coordinates by subdividing the map into triangles and applying affine transformations.
- Tested and debugged code on different maps, added handling for floating point errors and edge cases.
- Tested various C/C++ geometry libraries such as CGAL and GEOS.
- <u>Technologies:</u> C/C++, CGAL.

PROJECTS

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

Data Transmission with Visible Light   **Hanoi, Vietnam**
High School Project – https://github.com/phongulus/light-messenger   **2019**
- Built a pair of Arduino-based transceivers capable of transmitting text messages by blinking a white LED.
- Devised a communication protocol for data transfer, which involves sending a start code, the length of the message, and finally the text message itself.
- Designed the circuits of the transceivers with EAGLE, and soldered the circuits.

ADDITIONAL INFORMATION

Extracurriculars: Co-Editor-in-Chief of the Yale-NUS Undergraduate Journal, Member of YNC_Hacks.

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

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

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