Vinh Nguyen

Email: ngthanhvinh2000@gmail.com
Github: https://github.com/ngthanhvinh
Mobile: +33 7 60 25 50 49

EDUCATION

- **Ecole Polytechnique** — Palaiseau, France
  Double degree in Mathematics and Computer Science (CGPA: 4.18 / 4.3) — **Sep 2019 – Jun 2022 (expected)**

EXPERIENCE

- **DatakaLab** — Paris, France
  Software Engineer Intern — **Jul 2020 - Sep 2020**
  - Worked on the Smart Counting product, which focuses on tracking people and obtaining statistical data regarding gender/age/attention via camera stream without storing the images.
  - Researched and implemented a graph-based algorithm which merges trajectories of people, utilizing the Kalman filter (also known as linear quadratic estimation) combined with DatakaLab's ReID model. The new approach helped improve the tracking accuracy (in terms of ID switches, fragmentations, counting) by a large margin, compared to the old method.
  - Languages - Technologies: **Python, OpenCV**.

- **VinAI Research Lab** — Hanoi, Vietnam
  AI Engineer Intern — **May 2019 - Aug 2019**
  - Collected raw data from different online sources to create a dataset consisting of over 1000 annotated images containing plastic bags.
  - Developed an accurate **Faster RCNN** model to detect plastic bags on many polluted streets in Vietnam.
  - Languages - Technologies: **Python, Tensorflow, Keras, Matplotlib**.
  - Source: https://github.com/VinAIResearch/plasticbag-faster-rcnn.

- **HUS High School for Gifted Students** — Hanoi, Vietnam
  Teaching Assistant — **Jan 2017 - Jan 2019**
  - Taught **C/C++ programming language, algorithms and data structures** to a group of 10 students preparing for the Vietnam National Olympiad in Informatics.

ACHIVEMENTS AND AWARDS

- **Ranked 1st**, Southwestern Europe Regional Contest (SWERC) 2019-2020 — **Jan 2020**
  - Competed in a team of three to solve 10-12 algorithmic problems in five hours, using **C++/Python**. In total, 100 teams from 51 institutions of Southwestern Europe (France, Switzerland, Spain, Italy, Portugal and Israel) participated in this contest. Qualified for the **ICPC World Finals 2020** in Moscow.

- **Gold Medal**, Vietnam National Olympiad in Informatics — **Jan 2018**
  - Competed individually to solve 4 algorithmic problems in **C++** during 3 hours. The competition was officially organized by Vietnam Ministry of Education and Training, in which over 10,000 high school students across Vietnam participated.

- **Gold Medal**, Singapore National Olympiad in Informatics — **Mar 2018**
  - Competed individually with the best contestants in Southeast Asia, solving algorithmic problems in 5 hours. Won the first place with a perfect score.

PROJECTS

- **knowurmusic**
  - Led a team of two to design and implement a web app which displays music data of users using Spotify API.
  - Languages - Technologies: **React/Redux (JavaScript), HTML, CSS**.
  - Source: https://github.com/ngthanhvinh/knowurmusic.
  - Website: https://knowurmusic.herokuapp.com/.

- **SDL Tetris**
  - A well-designed console game based on the traditional Tetris game with some modified rules.
  - Implemented all logical functions (such as scoring, rotations and left/right/down movements) in **C/C++**.
  - Source: https://github.com/zimportant/SDL_Tetris.