# Vinh Nguyen

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# **EDUCATION**

#### • Ecole Polytechnique

Palaiseau. France

Bachelor of Science - Double degree in Mathematics and Computer Science

Sep 2019 - Jun 2022 (expected)

## Experience

#### • VinAI Research Lab

Hanoi, Vietnam

AI Engineer Intern

May 2019 - Aug 2019

- Collected raw data from different online sources to to create PlasticVNOI, a dataset consisting of over 1000 images containing plastic bags. Most of the images were then annotated manually, while the others were machine-annotated and human-verified.
- Integrated the **PlasticVNOI dataset** with the well-known **PASCAL VOC dataset**, and eventually used the combined data to develop an accurate **Faster RCNN** model to detect plastic bags on many polluted streets in Vietnam.
- Languages Technologies: Python, Tensorflow, OpenCV, Keras.
- Source: https://github.com/ngthanhvinh/plasticbag-faster-rcnn.

# • HUS High School for Gifted Students

Hanoi, Vietnam

Informatics Tutor

Jan 2017 - Jan 2019

• Instructed high school students to prepare for the Vietnam National Olympiad in Informatics, with content covering from the C/C++ programming language to algorithms and data structures.

#### ACHIVEMENTS AND AWARDS

## • Gold Medal, Vietnam National Olympiad in Informatics

Jan 2018

- Competed individually to solve 4 algorithmic problems in C++ during 3 hours. The competition is officially organized by Vietnam Ministry of Education and Training, in which over 10,000 high school students across Vietnam participated.
- Top 5, Vietnam Team Selection Contest in Informatics

May 2018

- Competed with other 31 best Informatics-specialized students selected from the Vietnam National Olympiad in Informatics. The contest consisted of 3 five-hour rounds, including the **Asia-Pacific Informatics Olympiad**.
- Gold Medal, Singapore National Olympiad in Informatics

Mar 2018

- Invited to Singapore to compete with the best contestants in Southeast Asia, solving algorithmic problems in 5 hours. Won the first place with a perfect score.
- Master rating 2248, Codeforces
  - Top 1% on Codeforces a competitive programming website with over 60,000 active users.

# Projects

# • React 2D Gameboard, HSGS Hackathon 2018

- Led a team of 4 students to design the online graphical interface for several 2D math puzzles with **React**.
- Source: https://github.com/ngthanhvinh/hsgs-hackathon-18.

#### • SDL Tetris

- A well-designed console game based on the traditional Tetris game with some modified rules.
- $\circ$  Implemented all logical "back-end" functions (such as scoring, rotations and left/right/down movements) in  $\mathbf{C}/\mathbf{C}++$ .
- Source: https://github.com/zimportant/SDL\_Tetris.

#### • ObjTest

- A web app for object classification, utilizing the VGG16 pretrained model.
- Languages Technologies: Python, JavaScript, NodeJS, Flask, React, HTML, CSS, Tensorflow, Keras.
- Source: https://github.com/ngthanhvinh/ObjTest.