

KIEN PHAM

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Education

University of Minnesota – Twin Cities (College of Science and Engineering)

- **Awards:** Global Excellence Scholarship (\$60,000), Jawaid U. and Helen Z. Elahi Legacy Fund Scholarship (\$20,000), Undergraduate Research Scholarship (\$1,400).

HUS High School for the Gifted (HSGS) | <http://hsgs.edu.vn>

Aug 2016 – Jun 2019

Be Van Dan Secondary School, Hanoi | <http://thcsbevandan.edu.vn>

Sep 2015 – Jul 2016

Work experiences

VinAI Research | <https://www.vinai.io>

Jul 2019 – Aug 2020

AI Research Resident Intern, specialized in Computer Vision, applied deep learning into object detection.

Projects

Trash Detection and Mapping for A Geographical Area

Aug 2019 – Feb 2021

- Mentored by Minh Hoai Nguyen, Professor at Stony Brook University, and collaborated with Stony Brook University's CVLab.
- Built a dataset of over 44,000 trash images collected around Hanoi + Google StreetView API to train Mask RCNN detection model. Proposed a novel measurement for quantifying and visualizing the trash density level of most urban areas.

Global Face Anti-Spoofing for VinSmart Android Phones

Mar 2020 – Jun 2020

- Mentored by Tuan Anh Tran, Research Scientist at VinAI.
- Implemented the paper, "Domain Agnostic Feature Learning for Image and Video-Based Face Anti-spoofing" (Suman et al.).

Draw-on-Face

Jul 2019

- Created a program to automatically draws glasses and colors lips based on a pretrained facial landmarks detection model. Source code and details are available on my Github repository.

Standardized Tests

SAT: 1540/1600

Oct 5th, 2019

SAT Subject Tests: Mathematics Level 2: 800/800 | Physics: 800/800

May 4th, 2019

TOEFL iBT: 109/120

Sep 6th, 2020

Honors and Awards

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| 2021 | • Rank 8/845 participants in the Celebrate Neurodiversity Coding Contest 2021 |
| 2019 | • One of the few outstanding students who was directly admitted to Vietnam National University, Hanoi. |
| 2018 | • 3rd prize in Vietnam National University's Honors of Excellence in Computer Science |
| 2017 | • Silver medal in the HSGS Olympiad (participants come from Olympiad teams of Vietnam's top high schools).
• Promoted to USACO Platinum division – an US online National programming competition.
• Won a Codechef t-shirt by consistently rank among the top 10 of Vietnam during long challenge contests.
• Ranked highest in my high school class in the HSGS national team selection competition.
• Rating in the 97 th percentile, 5 silver (top 8%), 3 bronze (top 13%) medals in HackerRank contests |

Extracurricular activities

HSGS Code Camp Project

Jun 2018

Prepared materials and lectured C++ programming, college-level algorithms and data structures for 6 specialized classes (~300 students) from middle schools in Hanoi. Helped with difficult concepts and complex problems.

Co-author of the chapter 'All About Parenthesis', published in 'Tin Tuyen 2017'

Jul 2017

Written a chapter in a competitive programming book published by the Informatics Department of HSGS. The chapter discusses algorithms, strategies, and examples to tackle advanced problems about parenthesis processing.

Skills

- Proficient with C++ (3 years), Java (1 year), and Python (2 years). Also familiar with HTML/CSS.
- Experienced with deep learning frameworks (*Pytorch, Tensorflow, Keras*) and libraries (*opencv, numpy, pandas, scipy, matplotlib, scikit-learn, dlib, imutils, pillow, seaborn, etc.*). Can understand and effectively implement popular object detection algorithms (*Faster R-CNN, RetinaNet, SSD, YOLO, etc.*) and deep neural networks (*VGG, DenseNet, Inception, MobileNet, ResNet, FPN, etc.*).
- Skilled in problem solving, especially in mathematics and competitive programming.