
EDUCATION

Lincoln, NE, USA **University of Nebraska—Lincoln** **Aug. 2019 — Est. May 2023**

- Bachelor of Science, double major in Computer Science and Mathematics (Discrete Math and Cryptography).
- *Current GPA*: 4.0/4.0 (71/120 credit hours, 17 A+ courses, 3 A courses).

Ho Chi Minh City, Vietnam **High School for the Gifted** **Aug. 2016 — May. 2019**

- Computer Science honor class, focus on Data Structures and Algorithms. *GPA*: 9.7/10.0.

EMPLOYMENT

Production Engineer Intern **Facebook** **May 2021 – Aug 2021**

- Implement granular ACL enforcements for Shard Manager¹ (C++), a generic platform to develop and operate sharded applications.

Production Engineer Intern **Facebook** **Jun 2020 – Aug 2020**

- Implement automatic resources allocation adjustment based on historical usage for a distributed batch job scheduler (C++, Java).

Undergraduate Research **UNSAT Group, UNL** **Mar 2020 – now**

- Research software testing and verification: using dynamic and static analysis techniques to learn program interactions and invariants.

Software Engineer, Part-time **Zalo Group, Vietnam** **Aug 2018 – Aug 2019**

- Team Core Backend - R&D: optimize and implement new features for an in-house key/value database handling data of 100 million users and an HTTP long polling edge server (C++).

PUBLICATIONS

1. KimHao Nguyen and ThanhVu Nguyen. *GenTree: Using Decision Trees to Learn Interactions for Configurable Software*, International Conference on Software Engineering (ICSE), pages 1598-1609, 2021.
2. ThanhVu Nguyen and KimHao Nguyen. *Using Symbolic Execution to Analyze Linux KBuild Makefiles*. International Conference on Software Maintenance and Evolution, New Ideas and Emerging Results (ICSME NIER), pages 712–716, 2020.

PERSONAL PROJECTS

- **Gomoku** (2018). Gomoku AI Engine. C++ (AI, HTTP+WebSocket Server), *HTML/CSS/JS* (Web UI).
- **Energy Mesh** (2016). Monitors the electric energy consumption of each device using a wireless sensor network. C++ (embedded firmware), *NodeJS* (back-end), *AngularJS* (front-end).

AWARDS/ACTIVITIES

- **Outstanding Undergraduate Research Assistant Award** (2021), one recipient a year, selected by the faculty.
- **Top Presenter Award** at the **Nebraska Student Research Days** (2021), six recipients out of 154 participants.
- **UCare** (2020-2021), scholarship for undergraduate researcher assistants.
- **First Prize** at site, **Second Prize** in region at the ICPC 2019 North Central Regional Contest.
- **First rank** (2018), Asia-Pacific Informatics Olympiad — Online Contest.
- **Best Young Inventor Award** (2014), by World Intellectual Property Organization (WIPO).
- **2 × Gold Medal** (2013 & 2014), at Asian Young Inventors Exhibition 2013 and 2014.
- **Special Award** (2013), by Korea Invention Academy (KIA), for Smart Control Panel project.

¹<https://engineering.fb.com/2020/08/24/production-engineering/scaling-services-with-shard-manager/>