ndkimhao.github.io   **KIM HAO D. NGUYEN**   ndkimhao01@gmail.com

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).

EMPLOYMENT

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

- Implement fine-grained storage ACL for Shard Manager[1] (*C++*), a generic service to manage shard assignment for 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. KimHao Nguyen and ThanhVu Nguyen. *GenTree: Inferring Configuration Interactions using Decision Trees* (Tool Demonstration), Automated Software Engineering (**ASE**), *accepted*, 2021.
3. Didier Ishimwe, KimHao Nguyen, and ThanhVu Nguyen. *Dynaplex: Analyzing Program Complexity using Dynamically Inferred Recurrence Relations*, Object-oriented Programming, Systems, Languages, and Applications (**OOPSLA**), *accepted*, 2021.
4. 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.

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 Scholarship** (2020) for undergraduate researchers, $2,400/year.
- **Garmin Scholarship** (2020), three concurrent recipients, $8,000/year.
- **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.

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