

Nikola V. Maruszewski

☎ (847) 644-3542 | ✉ nikola@marusz.com | 🌐 marusz.com | 🎧 [egelja](#) | 🆔 0009-0009-5468-4085 | 🌐 [nikola-maruszewski](#)

EDUCATION

Georgia Institute of Technology

PhD, Computer Engineering

- **Advisor:** Josiah Hester

Atlanta, GA

Aug 2025 – Present

Northwestern University

Master of Science, Computer Engineering

- **GPA:** 4.00/4.00
- **Thesis:** Improved Prefetching Techniques for Linked Data Structures
- **Committee:** Nikos Hardavellas (advisor), Peter Dinda, Russ Joseph

Evanston, IL

Sep 2022 – Jun 2025

Northwestern University

Bachelor of Science, Computer Science

- **GPA:** 4.00/4.00
- Dean's list with High Honors, all quarters

Evanston, IL

Sep 2022 – Jun 2025

EXPERIENCE

Undergraduate Researcher

PARAG@N Lab

Sep 2022 – Present

Evanston, IL

Led a research project to design improved Quantum Systems software.

- Designed and programmed a quantum compiler to optimize quantum circuits for emerging quantum computer topologies.
- Created a development framework and tools for further quantum systems research.
- Student leader of the project while an undergraduate student.

Machine Learning Developer

Caterpillar, Inc.

Sep 2024 – Present

Evanston, IL

Worked part-time in the Autonomy and Automation Division on Machine Learning pipelines.

- Helped bring the project to an MVP and create an initial deployment.
- Worked with architect on major design decisions.
- Responsible for the design and implementation of key features.
- Continuation of work from internship.

Software Engineering Intern

Caterpillar, Inc.

Jun 2024 – Aug 2024

Peoria, IL

Worked in the Autonomy and Automation Division on computer vision and data processing.

- Worked on the design and implementation of a new data warehouse and processing pipeline in Python.
- Designed and implemented distributed concurrency control systems for distributed compute with ZooKeeper.
- Worked a smartphone vehicle calibration system using OpenCV in Python.
- Learned about commercial robotics and autonomy platforms.

Teaching Assistant

Northwestern University

Jun 2023 – Jun 2024

Evanston, IL

Acted as an undergraduate peer mentor for CS 321: Programming Languages and CS 213: Intro to Computer Systems.

- Held several office hours each week.
- Answered questions, both synchronously in office hours and asynchronously on a Piazza message board.

Campus Ambassador

Ansys, Inc.

Sep 2023 – Jun 2024

Evanston, IL

Acted as the Campus Ambassador for Ansys at Northwestern.

- Researched, reached out to, and scheduled meetings with relevant campus groups to discuss Ansys' tools.
- Organized lunch info sessions for Ansys, including booking rooms and organizing food.
- Coordinated with a member of the Ansys team for the campus work.

AWARDS AND HONORS

- McCormick Summer Research Award** | *Northwestern University* 2023
Title: “A Compiler for Quantum Chiplets.” Advised by Nikos Hardavellas.
- Northwestern Academic Year Undergraduate Research Award** | *Northwestern University* 2023
Title: “A Compiler for Quantum Chiplets.” Advised by Nikos Hardavellas.
- Dean’s List with High Honors** | *Northwestern University* Dec 2022 — Present
Awarded each quarter to students with a 4.00 GPA. Received every quarter at Northwestern.

TALKS AND PRESENTATIONS

- A Compilation Framework for Chiplet-Based Quantum Computing Systems** Sep 2023
Given at Northwestern University.
- Quantum Computing Research at PARAG@N** May 2023
Lecture given for a class session of COMP_ENG 456 at Northwestern University.

RESEARCH GRANTS

- McCormick Summer Research Award** | *Northwestern University* 2023
Title: “A Compiler for Quantum Chiplets.” Advised by Nikos Hardavellas. \$4500 (supplemented to \$8000).
- Northwestern Academic Year Undergraduate Research Award** | *Northwestern University* 2023
Title: “A Compiler for Quantum Chiplets.” Advised by Nikos Hardavellas. \$1000.