Nikola V. Maruszewski

Student and Researcher

Profile

Computer science major with a passion for learning. I plan to complete a masters degree through the BS/MS program at Northwestern University. Currently performing quantum systems research with Prof. Nikos Hardavellas in the PARAG@N Lab. I also have interests in computer engineering, embedded devices, machine learning, and compilers.

Work experience

Present
↑
Jun 2023

Summer Undergraduate Researcher
PARAG@N Lab

Funded by an NSF REU and a grant from the NU CS department, I was able to perform cutting-edge research on quantum computing.

- 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.

Aug 2023
↑
Jun 2023

Peer Mentor
Northwestern University

Acted as an undergraduate peer mentor for CS 321 Programming Languages.

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

Education

Present
↑
Sep 2022

Bachelor of Science, Computer Science
Northwestern University

Score: 4.00/4.00

Relevant Coursework:
- CS 322: Compiler Construction
- CS 349: Machine Learning
- CS 449: Deep Learning

Jun 2022
↑
Aug 2018

High School Diploma
Roycemore School

Score: 4.80/4.00

Relevant Coursework:
- AP Physics C: Mechanics and E&M
- CS 213: Intro to Computer Systems (Dual Enrollment @ NU)
- MATH 240: Linear Algebra (Dual Enrollment @ NU)

Contact

Email
me@nikola.cx

Phone
(847) 644-3542

Address
8645 Saint Louis Ave.
Skokie, IL 60076, US

Website
https://www.nikola.cx

Github
egelja

Linkedin
nikola-maruszewski

Mastodon
@nikola@discuss.systems

Skills

Programming Languages:
- Python
- C and C++
- JavaScript
- Java
- MATLAB
- Shell Script

Machine Learning:
- PyTorch
- NumPy
- PolaRS
- Scikit-learn

Tools:
- Docker
- Containerd
- Taskfile
- Make
- Git
- Linux

♥ Volunteering

Jun 2022
↑
Aug 2021

Volunteer
Distributed Proofreaders

Proofread books for Project Gutenberg through Distributed Proofreaders.

- Gained valuable volunteering experience.
- Provided proofread books for public domain usage.

🏆 Awards and Honors

2022.06.03

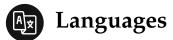### Rebecca Ashley Thatcher Award for Overall Academic Achievement
Roycemore School

Awarded to the best-performing student in the Roycemore Senior class.

2022.05.13

Headmaster's Award
Roycemore School

Awarded to the Senior best representing Roycemore's Core Values.

🗛 Languages

English	Native Speaker
Serbian	Native Speaker
French	Conversational

Interests

Embedded Devices:
- ESP-32
- Pololu Wixel

Computer Engineering:
- Hardware Design
- Architectures

Programming Languages:
- Interpreter Design
- Compiler Construction
- Code Analysis and Transformation

Machine Learning:
- Convolutional Neural Networks
- Reinforcement Learning
- Financial Prediction