# NORA GERA

US Citizen

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## LEARNING

Compilers
Programming Language Design
Machine Learning
Artificial Intelligence
Discrete Structures
Data Structures
Functional Programming
Object-Oriented Programming
Algorithms
Operating Systems
Probability and Statistics
Differential Equations
Linear Algebra
Molecular and Cellular Bio-engineering
Bio-instrumentation
Confocal Microscopy
Optical Coherence Microscopy
Arduino Boards

## TECH STACK

C# | .NET | Angular | SQL
Python | PyTorch
C | C++ | Java | OCaml
Logisim | Assembly | MATLAB
ImageJ | CAD Pro | R | R Studio

## LANGUAGES

**English:** Native
**Spanish:** Advanced / C2

## REFERENCES

**Prof. Andrew Myers**
myers@cs.cornell.edu

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**Prof. Steven Adie**

## ABOUT ME

*A dedicated and driven computer scientist, seeking to solve problems at scale.*

## EDUCATION

### BS Computer Science | Cornell University

Aug 2021 – May 2021 | Ithaca, NY

- Minor in Biomedical Engineering
- GPA: 4.0 (Dean's List All Semesters)
- Entered at age 15, graduated in 3 years

**GRE Scores:** 170/170 Quant, 161/170 Veral, 6/6 Analytical Writing

## EXPERIENCE

### Software Engineer | Microsoft

June 2021 – Now | Redmond, WA

- Full-stack developer leading revitalization of a web app crucial for connecting Windows builds to external partners (Dell, HP, etc.) (Angular front-end, .NET back-end, SQL database)
- Enabled cross-team connections with database management for more successful, higher-performance, lower latency, back-end syncs, with over 2M+ API requests coming each day
- 1st place "Hack for Industry" in a global hackathon on a machine learning application for tumor detection and early intervention
- Committed to using a Computer-Science mindset to solve industry-scale problems
- Gained perspective on Cybersecurity and Privacy at Microsoft STRIKE events

### Undergraduate Researcher | Cornell University

May 2020 – Dec 2020 | Ithaca, NY

- With the guidance of Prof. Andrew Myers, added secure querying operations verifying object trust relationships in **A L**anguage of **S**ecure **O**bjects (**ALSO**), envisioning applications in Banking Transactions and Blockchain Security
- Analyzed information flow control in the ALSO implementation of the game, A-MUD

### Undergraduate Teaching Consultant | Cornell University

Jan 2020 – May 2020 | Ithaca, NY

- Worked as a teaching consultant for CS 2110-Object-Oriented Programming and Data Structures
- Helped students on monthly CS projects and conceptual understanding with consulting hours and managed grading of projects, assignments, and exams

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**Prof. Robbert van Renesse**
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# OTHER MAJOR PROJECTS

## Memory Allocation System in C

- C, in-line RISC-V assembly
- Created a thread-safe implementation of malloc, maintaining data and structural integrity

## Buffer Exploit

- Call stacks, RISC-V assembly, and reverse-engineering
- Demonstrated a friendly hacking challenge

## Operational, Fully-Pipelined RISC-V Processor

- C, Logisim
- Developed a fully functional RISC-V processor using logic gates for handling recursion and function calls within assembly instructions

## Shortest-Path, Max Reward

- Java, Algorithms
- As part of constructing the algorithm, it maximized the number of monetary “coins” gained over the game walk of the shortest path algorithm by 15%