

Education

Northeastern University: Bachelor of Sciences in Computer Science

Class of 2023

Khoury College of Computer Sciences

GPA: 3.9 / 4.0

- **Relevant Coursework:** Advanced Machine Learning, Reinforcement Learning, Complexity Theory, Machine Learning, Artificial Intelligence, Cognition, Distributed Systems, Software Engineering, Algorithms and Data Structures, Mathematics of Data Models, Computer Systems, Embedded Design for Robotics, Object Oriented Design, Foundations of Cybersecurity, Science Journalism, Bostonography (Data science course analyzing Boston's data)
- **Honors and Awards:** Dean's scholarship & Dean's list 2019, 2020, 2021, 2022, 2023, 1st place at Northeastern Interdisciplinary Case Competition, 1st place at Husky Health Innovation Challenge
- **Activities:** President of TAMID finance & consulting group, Revolve hip hop dance team, Competitive Programming Club

Experience

SWE Intern (Reality Labs) – Meta.

May 2022 - August 2022

- Developed new features for Horizon Worlds, Meta's flagship Metaverse experience in virtual reality
- Led an internal hackathon project team and won the "Just Ship It" award for creating a hack ready for production
- Led cross-functional meetings to drive new features and collaborations

Software Intern – QuEra Computing.

Jan 2022 - May 2022

- Developed full stack software for a **Rydberg atom array based quantum simulator / quantum computer**, working with both low level **quantum controls** and **high level software** to provide cloud service
- **Enabled reliable configuration of large, arbitrary qubit geometries** by developing and implementing novel atom sorting and arrangement algorithms
- **Streamlined holography pipeline**, including automating Zernike optimization techniques for SLMs
- Contributed to [Bloqade](#): an open source, high performance Julia-based emulator for quantum computation and quantum simulation on the neutral atom platform

SWE Intern (AI & Data Developer Experience) – Facebook.

May 2021 - Aug 2021

- Developed infrastructure enabling transfer learning for AI models used in advertising, Instagram feed, reels, etc.
- Architected and implemented a detection, alerting, and diagnosis system for NE (Normalized Entropy) explosions during model training workflows
- **Saving over \$113MM of yearly lost revenue** by automatically detecting and mitigating failed AI training workflows

Quantum Computing Researcher – University of Waterloo.

Feb 2021 - June 2021

- Research as part of the University of Waterloo's Institute for Quantum Computing (IQC), in the Transformative Quantum Technologies (TQT) group
- **Developed novel algorithms to arrange and configure large Rydberg atom arrays, enabling large-scale trapped atom quantum computers and quantum simulators**
- Work resulted in a paper (submitted to Physical Review A) and patent application. Preprint available at <https://arxiv.org/abs/2212.03885>

Software Engineering Intern – Vicarious Surgical.

Jan 2021 - May 2021

Vicarious Surgical develops virtual reality enabled surgical robots for minimally invasive surgery.

- Designed and implemented a Python-based aggregation and analysis platform for high volume surgical robot data
- **Drove improvements in surgical robot reliability** through creating data visualization and exploration tools in React

- **Automated surgical video analysis** through developing computer vision software tooling to capture tool usage and sub-second electrosurgery activation

Lead Software Developer – Deuce Technologies.

Jun 2018 - Aug 2019

Deuce Technologies is a stealth stage startup headquartered in Silicon Valley.

- **Pioneered development of alpha prototype** that led company to be accepted into a startup accelerator
- **Directed software design, architecture, and development** of a multifaceted social network system
- **Managed a team of 5 software developers** to deliver multi-platform features on critical business deadlines
- Worked extensively with GraphQL, Algolia, Node.js, Firebase/Firestore, and React Native

Bioinformatics Trainee – NASA Ames Research Center (Moffett Field).

Jun 2017 - Jul 2017

- **Learned to analyze gene data** and apply omics-based bioinformatics research to space biological science
- **Developed research proposal** applying data analyses from the GeneLab Data Repository

Hardware Intern – Electric Imp.

Jun 2017 - Nov 2017

Electric Imp is a late stage Internet of Things startup that develops an enterprise grade secure IoT platform.

- **Optimized assembly processes** of wireless gateway nodes to achieve 63% higher throughput
- **Managed orders, assembled, and tested** battery powered sensor nodes and other online products

Software Development Intern – Zizmos.

Jun 2016 - Feb 2017

Zizmos is an early stage startup building a distributed seismic network with earthquake early warning capability.

- **Designed and developed infrastructure monitoring system** to detect failures of distributed cloud infrastructure components including MongoDB, RabbitMQ, and Node.js servers
- **Worked with a worldwide team on Android app** with earthquake early warning and visualization
- **Developed simulation toolkit** for generating real time earthquake data
- **Developed cloud-based, automated stress and scalability testing suites** for real-time systems by simulating failures and finding scalability bottlenecks. Zizmos has thousands of earthquake detection sensors worldwide

Course Development Contractor – YouthStartup.

Apr 2016 - Jun 2016

- **Developed CS course materials** for youth computer science classes in MIT App Inventor
- **Applied bleeding-edge Linux virtualization** technologies to enable Android development on Chromebooks

Leadership

President – TAMID Group at Northeastern University.

Jan 2022 - June 2022

TAMID is a finance, consulting, and entrepreneurship club that consults pro-bono for technology and consumer startups.

- **Led a 14-person E-Board to run a 140+ active member organization**
- **Reduced information silos in leadership** by introducing new collaboration patterns in Notion and new processes including cross-functional meetings
- **Forged partnerships with local and international startups** for technical and management consulting teams
- **Grew diversity and inclusion** of members across disciplines, backgrounds, race, and gender

Venture Analyst – Northeastern's IDEA Venture Accelerator.

Jan 2020 - Jan 2021

IDEA is Northeastern's student-run venture accelerator that provides resources and support for entrepreneurs.

- **Conducted holistic business analysis** of ventures applying for the bimonthly \$10k gap fund
- **Advised idea-phase founders and ventures** on ideation, customer discovery, and technology
- **Delivered insights on IDEA's ventures, mentors, and community engagement** using Salesforce

President of Computer Science Club – Mountain View High School.

Aug 2016 - Jun 2019

- **Grew club** from infancy to over 60 active members
- **Led teams and participated in app development** for teachers, students, and school using React and Firebase
- Applications developed are currently used by over 3000 students and teachers per month

Founder, Lead Hackathon Organizer – MVHacks.

Nov 2015 - May 2019

MVHacks is a registered 501(c)(3) nonprofit organization that organizes high school hackathons.

- **Secured financial sponsorships** for MVHacks 2017, a 100 student hackathon at Hacker Dojo
- **Led organizing team** for MVHacks 2.0, a 12-hour, 150+ student hackathon at Cisco Systems

- **Planned event logistics, led outreach, secured \$22,000 of financial sponsorships** (Google, Microsoft, LinkedIn, Ford Research Labs, Cisco, and more)

Extracurricular Courses & Certifications

- **CS-191x: Quantum Mechanics and Quantum Computation, 2020:** EdX course from UC BerkeleyX, credential 18fb330fda7e47ec834dafaa682a5a0b. Grover's algorithm, Shor's algorithm, Hamiltonians, spin qubits.
- **Qiskit Certificate of Quantum Excellence, 2020:** certificate from IBM Qiskit Global Summer School 2020.
- **Deep Learning (5 course series), 2020:** Specialization certificate for Deep Learning on Coursera by deeplearning.ai, credential UW7XJ2WBD4A2. CNNs, RNNs, sequence models, and deep learning strategies.

Awards

- 2019, 2020, 2021, 2022: **Dean's Scholarship & Dean's List** at Northeastern University
- 2021: **Undergraduate Research Award** from the University of Waterloo's Institute for Quantum Computing (IQC)
- 2019: **1st Place, Northeastern Health and Innovation Case Competition**
- 2019: **1st Place, Northeastern University Case Competition**
- 2018: **National Merit Scholarship, Commended** and **Member of the California Scholarship Federation**
- 2016, 2017, 2018: **Best UI, Best Community Service, Most Creative App** at MVHS App Competition
- 2017: **University of Toronto Special Award**
- 2017: **2nd Place at Synopsis Science & Engineering Fair**
- 2017: **Certificate of Achievement Award** from ASEI Silicon Valley Emerging Technology
- 2017: **Top 10 Hackathon Project** at SM Hacks hackathon
- 2016: **1st Place at Synopsis Science & Engineering Fair**
- 2016: **Entrepreneurial and Startup Award** from Sudhakar Muddu Foundation for most startup-worthy project
- 2016: **Wolfram Alpha Special Award** at Los Altos Hacks hackathon
- 2016: **FIRST Robotics Regional Championship Winner** with robotics team
- 2014: **3rd Place at Synopsis Science & Engineering Fair**
- 2014: **U.S. Navy Office of Naval Research Naval Science Award**
- 2014: **ACM 2nd Place Award**

Software Skills

Artificial Intelligence: Reinforcement Learning, Deep neural networks, Keras, Tensorflow, NumPy

Scientific Computing: Python (NumPy, Pandas, Tensorflow, Keras), Julia

Languages: Python, Java, Go, C++, C#, Julia, JavaScript & Node.js (also familiar with R, C, Verilog)

Web Technologies: React, GraphQL, MongoDB, Firebase, Algolia, Elasticsearch, Redis, Cassandra, Linux, Git

Cloud: Microservices, Google Cloud, AWS, Heroku, REST, Internet of Things