

Benjamin E. Jordan

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[Portfolio Website](#)

Education	Cornell University M.Eng. in Computer Science	[Expected Dec 2023]
	Rochester Institute of Technology B.S. in Computer Science, 3.65 GPA *Magna Cum Laude, 3.94 avg. over final 3 semesters	[Graduated Dec 2022]
Skills	Programming: C#, Java, Javascript, C/C++, Python, Angular, SQL Other Skills: Git, JetBrains, Visual Studio, Vim, Linux, Windows, Unit Testing, Agile	
Experience	Research Software Developer	[Rochester NY, Aug 2022 - Present]
	<ul style="list-style-type: none">Hired part-time by RIT faculty to develop an interactive listening testUses 3D graphics to collect data on how participants interpret audioTechnologies used include Angular, Typescript, Three.js, and C#	
	SWE Internship at Carestream	[Rochester NY, May 2022 - Aug 2022]
	<ul style="list-style-type: none">Developed and maintained long length x-ray functionality in Carestream's ImageView softwareUsed C# and worked on one of five agile development teams	
	Research Software Development Intern	[Rochester NY, June 2020 - Aug 2021]
Coursework	<ul style="list-style-type: none">Independently implemented software for a research project with Dr. Sungyoung Kim to test speech perception and the effectiveness of hearing devicesImplemented eight training modules within the program using the JS WebAudio APIParticipated in weekly team meetings where software progress was presentedUsed to collect data for academic research (as seen here and here)	
	UCode Instructor	[Ithaca NY, June 2019 - Aug 2019]
	<ul style="list-style-type: none">Taught python and programming skills to children ages 6-13 in a group setting	
Coursework	Computer Systems, Algorithms, Programming Languages, Operating Systems, Databases, Graph Theory, Machine Learning, Cryptography, Parallel & Distributed Systems, Prof. Communications, Networking	
Activities	RIT Varsity Track and Field	[March 2019 - Dec 2022]
	RIT EDM Club Founder & Officer	[May 2020 - August 2022]
	RIT AI Club Member	[September 2022 - Dec 2022]
Awards	Liberty League All-Academic Team RIT Presidential Merit Scholarship Dean's List	
Projects	Graph Neural Network Experiment (Academic) <ul style="list-style-type: none">Final project for Machine LearningDesigned, implemented, and reported an experiment on the GraphSAGE neural network modelProposed that utilizing multiple aggregation functions would improve model performanceUsed NumPy and PyTorch	
	EQ Audio Effect (Personal) <ul style="list-style-type: none">Wrote a four filter parametric equalizer plugin using the JUCE C++ frameworkSuccessfully used the EQ inside personal music making software	

Projects Cont.

Omnitone (Professional)

- Independently created a program that allows a user to experience audio as if it is inside one of two selectable rooms
- Implemented an algorithm that combines A-format ambisonic audio into four channel B-format audio, which can be converted into a stereo format
- Includes a Pannellum VR viewer that allows the user to rotate and change their listening position within the room
- Written using Javascript, HTML, and CSS

Analyzer/Translator (Academic)

- Final group project for Programming Language Concepts written in Java
- Takes the given programming language as input, checks it for validity, and translates it into C, Python, or Java
- Individual responsibilities included creating the semantic analyzer
- The semantic analyzer functions by creating a lookup table to store variables and user functions found in the parse tree
- It then searches the parse tree for patterns (ex. return statements, func. calls) and reports detailed error messages if pattern semantics are not valid

Encrypted Messenger (Academic)

- Independently created an RSA messenger for Concepts of Parallel and Distributed Systems final project
- Program sends and retrieves Base64 encoded public keys to and from a classwide server
- Uses a parallelized prime number generator to generate large RSA parameters quickly (ex. 1024 or more bits) and tests them for primality with the Miller-Rabin algorithm
- Written using C#