

Benjamin E. Jordan

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[Portfolio Website Link](#)

Education Rochester Institute of Technology [Expected Dec 2022]
B.S. in Computer Science, 3.6 GPA

Skills **Programming:** C#, Java, Javascript, C, C++, Python, MIPS, SQL, ASP.NET, Angular, React
Other Relevant Skills: Git, JetBrains, Visual Studio, Linux, Windows, Unit Testing, Agile

Experience **Research Software Developer** [Rochester NY, August 2022 - Present]

- Hired by Dr. Sungyoung Kim to develop an interactive listening test to collect data on how participants interpret audio
- Technologies used include Angular and Three.js

SWE Internship at Carestream [Rochester NY, May 2022 - August 2022]

- Developed and maintained Carestream's ImageView x-ray imaging software
- Worked as part of an agile development team
- Technologies used during this experience include C#, ASP.NET, and AngularJS

Research and Software Development Intern [Rochester NY, June 2020 - Dec 2021]

- Independently implemented software for a research project with Dr. Sungyoung Kim to test the effectiveness of hybrid cochlear implants
- Designed software architecture while researchers from RIT and UIowa designed each of 5 hearing tests in the program
- Participated in weekly standup meetings where software progress was demoed
- Research poster from initial study using the software: [research poster](#)
- Implemented the Omnitone project found below as part of a separate research project
- Technologies used include Javascript, PHP, SQL, HTML, and CSS

Instructor at UCode Ithaca [Ithaca NY, June 2019 - August 2019]

- Taught Python and programming skills to children ages 6-13 in a group setting

Coursework Computer Systems, Algorithms, Programming Language Concepts, Operating Systems, Artificial Intelligence, Machine Learning, Databases, Graph Theory, Professional Communications, CS Theory, Parallel & Distributed Systems, Cryptography

Projects

Cochlear Implant Testing Software - [auditoryneuro.com](#)

- Independently developed software used to test the effectiveness of hybrid cochlear implants
- Implemented 5 round based listening tests with multiple versions of 2 tests
- Stores user data for each test in a MySQL database
- Written using Javascript, PHP, and SQL, HTML, and CSS
- Uses the JS Web Audio API extensively for sound creation and processing

Projects Cont.

Omnitone (Research)

- Independently created a program that allows user to experience any sound file as if inside one of two selectable rooms
- Implemented algorithm that combines A-format ambisonic audio into 4 channel B-format ambisonic, which can be converted into a stereo format
- Includes a Pannellum VR image viewer that allows the user to rotate and change their listening position within the room
- Written using Javascript, HTML, and CSS

EQ Audio Effect (Personal)

- Wrote a four filter parametric equalizer plugin for audio processing
- Successfully used the EQ inside personal music making software
- Written using the JUCE C++ framework

Compiler/Translator (Academic)

- Final project for Programming Language Concepts written in Java
- Group of 4 created compiler that takes a made-up programming language as input, analyzes it, and translates it into C, Python, or Java
- Individual responsibilities included creating the semantic analyser
- Analyser operates 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 patterns 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#

Activities

RIT Varsity Track and Field
RIT EDM Club Founder & Officer
RIT AI Club

[March 2019 - Present]
[May 2020 - Present]
[September 2022 - Present]

Awards

Liberty League All-Academic Team
RIT Merit Scholarship
Dean's List