

# Benjamin E. Jordan

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[LinkedIn](#) | [Portfolio Website](#) | [GitHub](#)

Education	<b>Cornell University</b> [Graduated Dec 2023] M.Eng. in Computer Science - Concentration in Machine Learning and Systems - [3.76 GPA]
	<b>Rochester Institute of Technology</b> [Graduated Dec 2022] B.S. in Computer Science - Presidential Merit Scholarship - [3.65 GPA, 3.94 avg during 2nd half of degree]
Skills	<b>Programming:</b> Python, PyTorch, NumPy, C++, C, CUDA, Docker, Java, C#, Angular, Javascript <b>Other Skills:</b> Git, Linux, Unit Testing, Agile Development, LaTeX
Experience	<b>Machine Learning Engineer @ Northrop Grumman AIR Lab</b> [Jan 2024 - Present] <ul style="list-style-type: none"><li>Worked on ML research and development in digital signal processing &amp; computer vision domains</li><li>Relevant technologies used include Python, PyTorch, Docker, Git, and Linux</li></ul>
	<b>Machine Learning Engineering Intern @ KLA</b> [May 2023 - Aug 2023] <ul style="list-style-type: none"><li>Independently researched and implemented semiconductor defect detection algorithms</li><li>Finetuned and quantized vision transformers for efficient and robust classification with limited data</li><li>Presented project during poster board session and was invited to give a second technical talk</li></ul>
	<b>Software Engineering Intern @ Carestream</b> [May 2022 - Aug 2022] <ul style="list-style-type: none"><li>Developed and maintained C# back-end functionality in Carestream's ImageView X-Ray software</li><li>Gained professional experience with unit testing, agile, git, large codebases, and OO design</li></ul>
	<b>Research Software Developer @ RIT</b> [Aug 2022 - Jan 2023] <ul style="list-style-type: none"><li>Re-hired part-time by faculty to develop software for spatial audio research during final semester</li><li>Independently created a <a href="#">program</a> with a 3D UI for data collection on spatial audio interpretation</li><li>Technologies used include Three.js, Angular, and Typescript</li></ul>
	<b>Research Software Developer @ RIT</b> [June 2020 - Aug 2021] <ul style="list-style-type: none"><li>Independently developed <a href="#">software</a> for cochlear implant research project with RIT &amp; UIowa faculty</li><li>Contains eight listening test modules created using Javascript and the Web Audio API</li><li>Participated in weekly team meetings where software progress was presented</li><li>Data collected from the program was used to produce research publications</li></ul>
Relevant Coursework	<b>ML:</b> Large Scale Machine Learning, Machine Learning Hardware and Systems, Reinforcement Learning, Computer Vision, Natural Language Processing, Machine Learning Theory <b>Sys:</b> Distributed Systems, Parallel Computing, Computer Architecture, Operating Systems, Networks <b>Math:</b> Numerical Linear Algebra, Algorithms
Activities	<b>RIT Varsity Track and Field (15-20 hrs / week commitment)</b> [March 2019 - Dec 2022] Read the book "Programming Massively Parallel Processors: A Hands On Approach, 4th Edition" [Feb 2024] Private CS Tutoring [May 2023 - August 2023]
Projects	<b>Text-To-Audio Generative Synthesizer</b> <ul style="list-style-type: none"><li>Adapted Meta's <a href="#">AudioCraft</a> open-source <a href="#">codebase</a> to create a generative text-to-audio synthesizer</li><li>Trained 3.3B parameter autoencoder + autoregressive language model</li><li>Prepared 160GB dataset of audio samples with multilabel and natural language text descriptions</li><li>Analyzed papers to guide hyperparameter, data preparation, and data augmentation choices</li><li>Plans to implement efficient, genre specific synthesis with <a href="#">low-rank adapters (LoRA)</a></li></ul>
	<b>Distributed Systems Labs &amp; Framework [DSLabs]</b> <ul style="list-style-type: none"><li>Created a Google spanner-esque distributed key-value store in Java</li><li>Implemented Paxos for replica group consensus, 2PC to achieve atomic commit for distributed transactions, and dynamic load balancing of shards to handle server reconfiguration</li></ul>