

# Aidan Colon

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## EDUCATION

- Rice University** Houston, TX  
*Bachelor of Science in Electrical and Computer Engineering (GPA: 3.86 / 4.00)* Aug 2021 - May 2025 (expected)
  - Relevant Coursework:** Network Science; Computer Architecture; Digital Signal Processing; Data structures; Algorithms; Machine Learning; Honors Linear Algebra; Probability and Statistics; Electronic Music

## SKILLS

- Programming Languages:** Python, C++, C, Java, MATLAB
- Software Development:** Git, Linux
- Data Science & Machine Learning:** Jupyter Notebook, PyTorch, Scikit-learn
- Creative Tools:** Max MSP, Ableton Live

## EXPERIENCE

- Software Engineering Intern** Sunnyvale, CA  
*Google* May 2024 - Aug 2024
  - Improved the process of debugging performance issues on SSDs by creating a Python program for simulating I/O workloads in a loop, identifying performance issues using user-specified performance thresholds, and collecting data from internal performance monitoring tools using parallel subprocesses
  - Created a user dashboard with data visualizations in Python to analyze performance data collected from my tool
- Summer Research Intern** Cambridge, MA  
*MIT Summer Research Program | MIT CSAIL* Jun 2023 - Aug 2023
  - Selected as part of the 2023 cohort for the MIT Summer Research Program and matched with the [Learning and Intelligent Systems Group](#), led by Prof. Leslie Kaelbling and Prof. Tomás Lozano-Pérez
  - Created an object-based memory module in Python leveraging pre-trained image segmentation models, which was tested in a mobile manipulation robot, and presented my results in a poster session

## PROJECTS

- Interactive electronic music system (Max MSP)** Programmed audio effects and wrote a synthesized accompaniment for a 12-channel setup and two violinists in my electronic music course (*Mar 2024 - Apr 2024*)
- Discrete wavelet transforms for image coding (MATLAB)** Implemented a 2D discrete wavelet transform from scratch for image coding in my Digital Signal Processing course (*Apr 2024*)
- DFT filter bank for demodulation (MATLAB)** Implemented a DFT filter bank from scratch to demodulate a mixture of audio recordings in my Digital Signal Processing course (*Apr 2024*)
- Microcontroller arpeggiator (C)** Used a multiple time base method to drive piezo speakers with PWM signals at different frequencies to play musical chords and arpeggios using an MSP430 microcontroller in my microcontrollers course (*Apr 2024*)
- Automated test case generation (Java)** Wrote a program in Java for data-driven test case generation of Python functions as part of my Intro. to Program Design course (*Sep 2023 - Dec 2023*)
- Compute RDMSTs in digraphs (Python)** Implemented a greedy algorithm to compute minimum spanning trees in weighted digraphs as a model for bacterial infection transmission in my algorithms course (*Mar 2023*)
- Google Maps navigation using graph search (Python)** Implemented A\*, Breadth-First Search (BFS), and Depth-First Search (DFS) algorithms to perform navigation in Google Maps in my first programming course (*Dec 2021*)

## ACTIVITIES

- Volunteer DJ | KTRU Rice Radio** Jan 2023 - Present
  - Host a weekly radio show as a volunteer DJ for Rice University's student-run radio station, KTRU-LP 96.1FM
- Research | MIT Media Lab** Aug 2023 - Apr 2024
  - Worked in a remote collaboration to explore the design of a machine learning tool that can generate room geometries from acoustic characteristics
- Orientation Week Advisor | Rice Student Success Initiatives (SSI)** Feb 2022 - Aug 2022
  - Introduced a group of 8 matriculating students to Rice's academics, policies, resources and values, as well as the traditions, culture and community of campus and my residential college along with 3 other advisors
  - Worked as part of a team of 48 advisors to train and prepare for welcoming 100+ matriculating students to our residential college community
- Research | Robinson Lab, Rice University** Nov 2021 - Apr 2022
  - Volunteered in the Magnetogenetics team, whose focus was on the use of genetically modified cells that respond to magnetic fields for non-invasive brain stimulation