

# Matthew Lee

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## EDUCATION

Riverdale Country School

GPA: 4.0 (A)

Columbia University - Freshman

GPA: 4.0 (A)

Bronx, NY

9-12<sup>th</sup> Grades

Manhattan, NY

B.A. Computer Science

## INTERNSHIPS

**Lisman Laboratories** – Riverdale Country School

*Researcher (2023) & Paid Intern (2024)*

Bronx, NY

June-July 2023 & 2024

- Conducted differential gene expression analysis on neuron morphological and transcriptomic data from the Allen Institute to uncover developmental patterns in neurological disorders

## EXTRACURRICULAR ACTIVITIES

**sustAIIn, Inc.** | *Founder & Board Director*

2024-2025

- Founded non-profit to elevate student voices in AI ethics discussions in education and society
- Organized a guest speaker panel with Columbia professors Shipra Agrawal and Asaf Cidon

**Deep Learning for Music Information Retrieval** | *Researcher & Participant*

2024-2025

- Worked with professors at Stanford's Center for Computer Research in Music & Acoustics (CCRMA), to train ML models that transfer singing genres/styles

**HeyBusking** | *Founder, President, Performer*

2020-2025

- Built platform connecting musicians to local venues, organized 50+ performances raising \$3,000+ for NGOs

**Columbia Science Honors Program** | *Student*

2023-2024

- Engaged in courses on relativity, quantum physics, and biotechnology

## PUBLICATIONS

**International Society for Music Information Retrieval (ISMIR)**

October 2024

*Title:* Generative Singing Style Transfer Across Genres

*Fields:* Artificial Intelligence, Music Information Retrieval, Voice Style Transfer

*DOI:* [https://ismir2024program.ismir.net/lbd\\_470.html](https://ismir2024program.ismir.net/lbd_470.html)

**Journal of Student Research**

November 2023

*Title:* Supervised Fusion Music Composition Through Long Short-Term Memory Stochastic Modeling

*Fields:* Artificial Intelligence, AI Fusion Music Generation, LSTM networks, RNNs

*DOI:* <https://doi.org/10.47611/jsrhs.v12i4.5919>

## AWARDS & HONORS

**National Merit Scholarship Finalist**

February 2024

**1<sup>st</sup> Place** – Marvin Hamlisch International Music Awards (Film/Media Scoring)

November 2024

**Scholastic Art & Writing Awards**

2023-24

**Gold Key:** Personal Essay, Critical Essay, Flash Fiction

**3<sup>rd</sup> Place, John Sexton Scholar** – [John Sexton History Essay Contest](#)

July 2023

## SKILLS

**CODING LANGUAGES:** Python (fluent), Java (fluent), C# (fluent), HTML (basic), CSS (basic)

**PROGRAMMING PROFICIENCY:** Machine Learning using PyTorch and SciPy Python libraries;

Statistical Analysis using Python Panda Library; Audio Signal Processing; Deep Learning for Music

Informational Retrieval; Game Development in Unity

**MUSIC SOFTWARE:** Logic Pro X; Sibelius

**LANGUAGES:** English (native), Korean (working proficiency), Chinese (basic)