# Titus Keith Roesler

tkr@mit.edu

09/2021 - present

Graduation: May 2025

#### Education

Massachusetts Institute of Technology (MIT)

• SB: Electrical Engineering (GPA: 4.8 / 5.0)

• Skills: Python, MATLAB, LATEX

**Selected Coursework:** Signal Processing • Signals, Systems, and Inference • Discrete-Time Signal Processing • Biomedical Signal and Image Processing • Music Processing • Computational Imaging: Physics and Algorithms • Dynamic System Modeling and Control • Differential Equations • Linear Algebra • Probability and Random Variables • Intermediate Probability Problem Solving

### Selected Research and Internships

• Research and Innovation Scholar, MIT SuperUROP

09/2024 - present

Research and develop methods for audio signal separation

- Exploit characteristics of music for more effective audio de-mixing

 Optical and Quantum Communications, Lincoln Laboratory Conducted theoretical and experimental analyses of data converters 05/2024 - 08/2024

Coded simulations and analyzed empirical data in MATLAB

#### **Extracurriculars**

Associate Advisor for First-Year Students	08/2022 - present
Resident Peer Mentor	08/2023 - present
Undergraduate Student Advisory Group in EECS	02/2024 - present
<ul> <li>Program Coordinator for PKG Public Service Center</li> </ul>	08/2023 - 09/2024

- Counselor for 2023 Social Innovation Exploration program
- Coordinator for 2024 Boston Summer of Service program
- Coordinator for 2024 Social Innovation Exploration program

## Teaching

• Teaching Assistant for Multivariable Calcu	lus (ES.1802)	09/2022 - 05/2024
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Led recitation. Held office hours. Maintained course website.

— Led exam reviews. Graded exams. Tutored students one-on-one.

• Teaching Assistant for Signal Processing (6.3000)

09/2023 - present

09/2024 - present

09/2024 - present

- Assist with teaching MIT's introductory signal processing course.
- Develop course materials, including problem sets, labs, and quizzes.
- Deliver lectures and recitations as needed. Lead guiz reviews.
- Hold office hours. Grade guizzes. Maintain course website.

• Teaching Assistant for Single-Variable Calculus (ES.1801)

Lead recitation. Hold office hours. Maintain course website.

Lecturer for a Signal Processing Seminar (ES.S31)

Deliver weekly hour-long lectures to 25–45 students.

Proposed and designed special MIT seminar from scratch.

#### Awards and Honors

•	Community	Service Award	(Experimental	Study Gr	oup)

05/2024

• EECS Undergraduate Teaching Assistant Award

05/2024

Outstanding Associate Advisor (2023 – 2024)

05/2024