# JACK LEIGHTCAP

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# EDUCATION

**Northeastern University** Boston, MA                                         August 2018 - May 2023
BSEE Electrical Engineering and Physics, *GPA*: 4.0
Dean's List all semesters · Lawrence Award, highest GPA in year (physics department)
**Relevant Courses**

| | | | | | |
|---|---|---|---|---|---|
| Circuits and Signals: Biomedical Applications | EECE | 2150 | Embedded Design: Enabling Robotics | EECE | 2160 |
| Fundamentals of Programming II | CS | 2510 | Fundamentals of Networks | EECE | 2540 |
| Modern Physics | PHYS | 2303 | Calculus III | MATH | 2321 |
| Differential Equations and Linear Algebra | MATH | 2341 | Cornerstone of Engineering II | GE | 1502 |

**Cambridge University** Cambridge, United Kingdom                              July 2019 - August 2019
Pembroke-King's Summer Programme: History of Modern Middle East, Shakespearean Drama
Young Global Leaders Scholarship · Northeastern GEO Grant

**Abington Heights High School** Clarks Summit, PA                              2014 - 2018
High School Diploma, *GPA*: 4.0
Mathematics Award · AP Scholar with Distinction · PLTW+AP Award · Symphony, Chamber, Honors Orchestra

# EXPERIENCE

Just some small hometown jobs as of now.

# PROJECTS

**Classical Scores Project**                                                   2017 - Present

- Request-based YouTube channel dedicated to sharing synced scores and recordings of obscure or underappreciated classical music. Grew channel to 2 million total views, 6 thousand subscribers, and 20 years of watch time in one year.
- Automation of video editing includes image manipulation in Python using Knuth-Plass Line Wrapping Algorithm applied to sheet music, and scripting Adobe Photoshop/Premiere.
- Backlog of videos produced into 2022 with automated release scheduling.

# ACTIVITIES

**Avant-Garde Piano Series**                                                   2017 - Present

- Recoreded Erik Satie's *Vexations* (1894). Longest recorded solo marathon piano performance, uninterupted 34-hour recording. Live-streamed performance using Open Broadcaster Software and ffmpeg.
- Additional recordings include works by Antheil, Cage, Ives, and Rorem.

**MBTA Speedrun**                                                              2019

- Used brute-force Travelling Salesman approach to determine the shortest possible path which visits all stops of the MBTA Green Line.
- Personal best time of 3:15.

# SKILLS

**Software**

- Proficient: Microsoft Office Suite, Autodesk Inventor, LaTeX, Adobe Premiere, Adobe Photoshop
- Familiar: SolidWorks, AutoCAD

**Programming**

- Proficient: Python, MATLAB
- Familiar: C++, Wolfram Mathematica, Racket

**Miscellaneous**
Piano, Viola, Modular origami, Accordion, Pirateering