Adrian Silva

Boston, MA · (443) 947-0773 · aisilva@alum.mit.edu · github.com/aisilva · aisilva.net

Education

Massachusetts Institute of Technology   **Cambridge, MA**
Bachelor of Science in Physics   Class of 2020

    Physics Coursework: Classical Mechanics I and II, Electricity and Magnetism I, Vibrations and Waves, Relativity, Quantum Physics I, Statistical Physics I, Experimental Physics

    Mathematics Coursework: Multivariable Calculus, Differential Equations, Modern Algebra and Group Theory, Real Analysis, Principles of Continuum Applied Mathematics

    Computer Science Coursework: Fundamentals of Programming, Introduction to Algorithms, Artificial Intelligence, Advances in Computer Vision, Introduction to Machine Learning

Experience

United States Patent and Trademark Office   **Remote**
Patent Examiner, Optical Measuring and Testing   March 2023 - Present
- Researching inventions to determine whether their inventive concepts overcome prior art
- Promoted after demonstration of increased work efficiency

Hen Lab (hen-lab.com)   **Laboratory for Nuclear Science, MIT**
Undergraduate Researcher   January 2017 - December 2017
- Created detector efficiency histograms used by the rest of the group for weighting data
- Tested thresholds on kinematics using simulated particle data
- Created a data analysis pipeline for reconstructing beam energy in the CLAS detector at Jefferson Lab
- Presented energy reconstruction workflow at poster session at Conference Experience for Undergraduates at Division for Nuclear Physics meeting of APS in Pittsburgh, Oct. 2017
    - CEU judged that this project was of high quality and paid for travel and lodging.

Projects

- **Unfretted Tapboard**
  A musical instrument, much like an unfretted Harpejji, which I designed and created after I could not find it on the market. Currently working on a sustain modification.
- **Thermometer Computer Vision**
  Used computer vision to detect the angle of a thermometer needle to measure temperature; compared result to current forecast to discard egregiously incorrect measurements
- **AR Pong**
  A pygame implementation of Pong which uses the camera feed to detect AprilTags to use as paddles.
- **Web Bots**
  A Python 2 bot to play the Wikipedia Philosophy Game: the bot clicks the first link of the requested article and recurses until arriving at Philosophy

Skills

- **Programming:** Python (experienced), C++ (intermediate), Ubuntu Linux (some bash scripts)

Hobbies

- Composing piano sonatas/ballades, improvising. Publishing here
- Designing musical instruments
- Learning guitar, learning to play unfretted tapboard