**Joongeun Choi**

**** 857-400-1443

joon.choi2025@gmail.com 

**Education** Winchester High School, MA 

## Experience

#### Internships

#### July 2024 – Current: [Climate Action Advisory Committee](https://www.winchester.us/267/Climate-Action-Advisory-Committee) (CAAC)

#### Collaborating with CAAC members, Winchester Transfer Station, and student council to initiate food waste recycling program at Winchester High School ([Proposal](https://docs.google.com/document/d/1mb7SzaHmDvwE2diWw-8j1iuTv4nwnKzEXzduAzPvVrA/edit?tab=t.0), [Documentation](https://docs.google.com/document/d/1dqB7rERcHxVRTorZnS2faUBudTkbJ9FBFEwcO9atGSo/edit?tab=t.0))

#### Approved by Principal on Dec. 16, 2024. To be implemented in Feb. 2025

#### Mar – Oct 2024: Department of Earth, Atmospheric & Planetary Sciences (MIT)

#### Fine-tuning cutting-edge climate-domain large language models (Advisor: Dr. Björn Lütjens)

#### Learned how to use virtual environments and MIT’s supercomputer

* Open-source [dataset](https://huggingface.co/datasets/Joon007/science-feedback) (~200 downloads), [fine-tuned model](https://huggingface.co/Joon007/finetuned-climategpt-7b) (~100 downloads), [Documentation](https://docs.google.com/document/d/1m_GG94wsabTgXrFmye59Y8sI7jgVwzXLa_OaQlNUjwM/edit?tab=t.0), [Github](https://github.com/Joongeun/MIT-Internship-2024/tree/main)

#### Feb – Dec 2023: Virtual (Indiana University–Purdue University Indianapolis, IUPUI)

* J. Choi and H. Jang, "Topic and Sentiment Analysis of Reddit’s Vaping-Cessation Community," 2023 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Istanbul, Turkiye, 2023
  + [Manuscript](https://ieeexplore.ieee.org/document/10385341), [Poster](https://drive.google.com/drive/folders/1HltDKM2ovj9BxRS7szfBYJohxwU_Mv8O), [Documentation](https://docs.google.com/document/d/10oF6e-zwGrWVeS7NE5nGPyTUK1b0jTWilxgw2IVk-Gg/edit?tab=t.0), [Github](https://github.com/Joongeun/IUPUI-Internship-2023)

#### Extracurricular Activities

#### Spring 2022 – Present: Badminton Team Founder and Coach

* 2024-2025: Reserved elementary school gym to hold twice-weekly training
* 2023-2024: 1st place at Massbad High School Team Tournament
  + Twice-weekly training before school + free blocks
  + Organizing state badminton league with 8 local high schools
* 2022-2023: Recruited team to enter Massbad High School Team Tournament (Div. 2)
  + Organized bake sale and sold club merch to fund team ($290-350 profit yearly)
  + Started training sessions during free blocks
  + Team: 4th out of 5 schools, Personal statistics: 2nd out of 57 players

Fall 2023 – Present: Secretary of Combat Robotics Club

* Vertical spinner robot – “Cheeze Grater” ([Documentation](https://docs.google.com/document/d/1hetOk2SgFanY1I_HAEgFZQOcgoneg_eoZV-UMoUI2KU/edit?pli=1&tab=t.0), [3D Cad Model](https://cad.onshape.com/documents/b2c77fa7f3340b3d879fcfe3/w/cb38449cbf572e8c6d9b9ce0/e/89866a7e5944d341a3602c8a))
* Currently leading a 2nd team to build a “lifter” robot ([Documentation](https://docs.google.com/document/d/1wJlkmOJw_NVJa5zkpD1YMGUstSarl5GpJ2XLCMsFKrg/edit?tab=t.0))
* Competed in [NHRL](https://www.nhrl.io/)’s 3 lbs robot division in September 2024
  + Won 2/4 prelim matches and advanced to single-elimination brackets (33rd out of 96 teams)

#### Fall 2021 – Present: American Computer Science League ([ACSL](https://www.acsl.org/about)) Team Leader

* Recruited team, taught contest material, and offered 1 on 1 help sessions

#### Personal Project

#### March - June 2022: Badminton Shuttle Launcher ([YouTube Link](https://youtube.com/shorts/Uo4yfBJH5Hw))

* Researched how electrical components work / how to program with the Arduino
  + [Tinkercad Circuit Design/Code](https://www.tinkercad.com/things/enLgOJtReA6-shuttle-launcher-with-stepper-motor?sharecode=hrb_zLyMkX1Xn8ryhTYP3mwj19c6sHutu6KG5KmvFZI)

**Programs & Competitions**

#### 7/22/24 – 8/10/24: [SEA Pre-College: Ocean Sciences in Woods Hole](https://sea.mycampus-app.com/ftpimages/2102/download/download_2668469.pdf?_=1716417391018) – selected

* Exposure to ocean science and environmental issues through guest lectures and lab visits
* Helped 5 groups extract and analyze “Argo” ocean data with Python

#### 3/2/24 – 3/3/24: MIT Blueprint (Hackathon) – selected

* Recruited team and led discussions to build “MealGPT” website, which queries the user’s food preference to ChatGPT to give a detailed meal plan with cooking instructions ([Github](https://github.com/CallingNC5/bp_project))

#### American Computer Science League (2021-2025)

* Yearly finalist

#### Badminton Tournaments

* 2024 Massbad High School Team Tournament
* 2024 Northeast Massbad Open Local Championships
* Bay State Games 2023
* 2023 Massbad High School Team Tournament
* 2023 Newton Parks and Recreation Badminton Tournament
* 2023 Northeast Massbad Open Local Championships
* 2022 Massbad Junior Open

6/20/22 – 7/1/22: [Inspirit AI Summer Program](https://www.inspiritai.com/)

* Learned fundamental machine learning techniques from Stanford/MIT graduates
* Created an object detection model (for self-driving cars) using python ([**Final presentation**](https://docs.google.com/presentation/d/1nk4_AQywIDoncPazdxsbwL8wX1iMCgo3iqssLSqCa1k/edit#slide=id.g13acbe574c9_0_1847))

## Academic Performance

GPA: 4.36/4.50 SAT: 1550/1600 (Math: 800, Reading/Writing: 750)

## Awards & Achievements

* Harvard University Book Award–1 of 2 recipients at school (2024)
* English Department Outstanding Award (2024)
* 1st place at 2024 Massbad High School Team Tournament (2024)
* Selected TEDx speaker at Winchester High School (2024)
* The President’s Volunteer Service Silver Award (2024)
* National Association for Korean Schools Junior Leadership Gold Award (2024)
* Voted “Most Likely to Save the World” senior-year superlative (2024)
* ACSL contest finalist and Highest scorer for Winchester High School (2023, 2022)
  + Outstanding Achievement Award (2023)
  + First Place Intermediate 3 Contest, State of Massachusetts (2022)
* 2nd Place for Boys Doubles (High School Badminton Division) in Bay State Games (2023)
* National Spanish Exam (NSE) Silver Award (2023, 2022)
* Grand Prize Award for Dokdo-East Sea Naming Survey-Activity Report Contest (2022)
  + Organized by National Association for Korean Schools ([NAKS](https://www.naks.org/jml/)); sponsored by South Korean Ministry of Foreign Affairs, [Final Submission](https://sites.google.com/view/eastseadokdoproject/home)
  + 2nd place award (2021)
* Grand Prize Award in Korean School Poetry Contest (2021)
* Award of Academic Excellence at 8th grade graduation (2021)
* Black Belt in Taekwondo (2020)
  + 1st place in sparring, 3rd place in poomse for local tournament (2019)

## Skills

* Programming: Python, Java, Web Development (HTML, Javascript, CSS)
* Hardware: Arduino board (C++), Onshape (CAD)

## Volunteering

Korean School of New England Teacher Assistant (Fall 2022 – Present)

* Writer/translator for the school’s newspaper, photocopier for 15 teachers

Taught Arduino board to Managuan college students in Spanish (Summer 2023, 2024)

* 2023: [Day 1](https://docs.google.com/presentation/d/1x8dGTU4SIIBPbu0qCz7Y-S-TwwtjbkGtpyQ3vRlzCLI/edit#slide=id.g254c0f37962_0_31), [Day 2](https://docs.google.com/presentation/d/1FIAUxTnXGpDBJrVwP_CUGQ_phyxtkKG_WZ8yfB42wMI/edit), Day 3: Group projects and “business pitch” for product
* 2024: [Day 1](https://docs.google.com/presentation/d/1kd6_vwbSrSsDKqUgrjN5bpqG4AkpJAM2AGKAMedgHTw/edit#slide=id.g2e9d6b25f00_1_77), [Day 2](https://docs.google.com/presentation/d/1HIO_vwrPEv5E_v62dAUziZ6UV20qegceK2zq27zKPyE/edit#slide=id.g2e9e3fb9eef_0_454), [Day 3](https://docs.google.com/presentation/d/1AGQ8COgREAbtAZaA_saQ527KLgZvfXJoSyoXatSUtqw/edit#slide=id.g2e9e3fb9eef_0_454)

Taught Python to high school students in Jakarta (Summer 2023)

* [Day 1](https://docs.google.com/presentation/d/1yYDpKp1Ue869TvH0KR2pOSHsx-k6eGVRVLIijTYDFVA/edit), [Day 2](https://docs.google.com/presentation/d/1RgzWosISPsQ2djqnijBWp0vNkvh0je0DqH3Wp0EGMzk/edit#slide=id.g25863b02277_0_156), [Day 3](https://docs.google.com/presentation/d/1ofZ0dSFVizxSyHmozn07lcIJDcfZXBk-rQ62s2UfxP8/edit#slide=id.g242b6f24e58_0_134), [Day 4](https://docs.google.com/presentation/d/1qWWmfEdh4HcxhQZqdfls4UkTH-QaPToTZsR9cxdyDG4/edit#slide=id.g242b6f24e58_0_134)

Taught English to Cambodian Elementary school students via Zoom (May-June 2022)

Weeded Wright-Locke Farm for town project to plant Miyawaki Forest (July 20, 2024)

## Hobbies

Badminton, Biking, Korean Calligraphy, Piano/Guitar, Sudoku