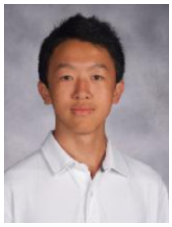

Liyang (Victor) Han

Curious Researcher • Human-Centered Builder • Servant-Leader

Mobile: +1 (262) 347-7624 Email: liyanghan1112@gmail.com

EDUCATION

- **Brookfield Central High School, WI (Public high school)** **9/2022 - Present**
- **GPA: 4.00/4.00** (Unweighted, Cumulative), **5.0/4.0** (weighted, Cumulative)
- **SAT (2 sittings): 1550** (780 R&W, 770 M); Superscore: **1560**.
- **AP (10):** Calculus BC (5), Statistics (5), CS A (5), Bio (5), Human Geo (5), ES (5), Chinese Language & Culture (5), Physics C - Electricity & Magnetism (4**),** Physics C Mechanics (4), Physics I (4)
- **University courses**: Data Structure, Milwaukee School of Engineering University;
  Linear Algebra and Diff Equations/Anatomy & Physiology/ Calculus III, University of Wisconsin-Milwaukee
- **Programs/Training:** MIT BWSI (Medlytics track): Python Core, Version Control, Git & GitHub

HONORS & AWARDS

1) **Regeneron ISEF: Translational Medical Science, Grand 2nd Place Award** — ParkinAid: A Multimodal AI-Powered diagnosis & robot-assisted rehab for Parkinson's Patients (Gr11, International)
2) **U.S. Provisional Patent 63/867,720** — ParkinAid: A Multimodal System for Parkinson's Diagnosis through Motor and Speech Disorder Analysis (Gr11, National)
3) **Paper** "*ParkinAid: A Multimodal System for Parkinson's Diagnosis through Motor and Speech Disorder Analysis using Machine Learning and Computer Vision"* will be published in the International Conference Proceedings Series (ICPS) by ACM, which will be archived in the **ACM Digital Library**, indexed by ***Ei Compendex, Scopus****, etc.*
4) **Regeneron ISEF Finalist**: An Auxiliary rehab device for Parkinson's with tremor/stiffness (Gr10, International)
5) **USACO Gold Division** (Gr11, National)
6) FIRST Tech Challenge **(FTC) World Championship twice** as software lead: Inspire Award 2nd Place (Gr10); Worlds Division 2nd Place (Gr11)
7) **Congressional App Challenge**, WI-5 — **1st Place**— ParkinAid AI Diagnosis App (Gr11, National)
8) National Junior Science & Humanities Symposium (**JSHS**) — Finalist (Gr10, National)
9) **President's Volunteer Gold Service Award:** Teaching Python for local community (Gr11, National)
10) **Diamond Challenge for High School Entrepreneurs** — **Semifinalist** (Gr11, International)
11) **2026 National Merit Scholarship Program — Semifinalist** (Gr12) (Finalist application submitted)
12) **John Locke Institute Global Essay Prize**: Theology "Why Pray", *Shortlisted* (Top 18.65%), 2025

RESEARCH & PROJECTS

1) ParkinAid — Multimodal AI Diagnosis & Robot-Assisted Rehabilitation system for Parkinson's
06/2024 – Present I Independent Researcher

- Built AI models (motion/tremor/speech, 2K+ samples, ~90% acc); Deployed as web/app for AI diagnosis.
- **Presented** on the 13th International Conference on Computer and Communications management (ICCCM 2025) on **July 13, 2025**, **the paper** *will be published in the* ***ICPS by ACM****, which will be archived in the* ***ACM Digital Library****, and indexed by* ***Ei Compendex, Scopus****, etc.*
- **U.S. Provisional Patent 63/867,720** for ParkinAid Software system**.**

2) **Auxiliary Rehabilitation Device for Finger Tremor/ Stiffness of Parkinson's Patients** **01/2023 – 05/2024**
Independent Researcher: Designed mechanical, electrical, software/app for Parkinson glove; Refined motion detection accuracy to 95%. ISEF and NJSHS finalist.

3) **MIT Beaver Works Summer Institute (BWSI) — Medlytics** **Research Student** **07/2025 – 08/2025**
MIT Lincoln Laboratory: Trained MRI lesion-segmentation AI models on large datasets; Presented and recognized as promising by MIT scientists.

4) **SoftCom Lab, California State Polytechnic University** **Summer Intern** **06/2024 – 08/2024**
ASL gesture CV: ~89% acc; Improved cleaning + aug & cross-val; Built scalable PyTorch pipelines w/ docs; Beat SOTA; Cut label noise; x-dataset eval.

5) **SoftCom Lab, California State Polytechnic University** **Summer Intern** **06/2023 – 08/2023**
- Built a BERT-based NLP system for detecting health misinformation, deployed in the cloud.
- Optimized Python data pipelines to ingest and process multi-format datasets from diverse online sources.

LEADERSHIP & COMMUNITY ACTIVITIES

1) **ParkinAid Nonprofit Organization—Founder and President** **1/2024~Present**
- Deliver in-person education to ~2,000 community members on Parkinson's signs, management, and home-based rehab; programs brought to Milwaukee senior centers, Aurora Health Care sites, city farmers' markets, Independence Day events, and the Wisconsin Dragon Boat Festival.
- To date**, served 1.1K users from 15 countries with 2,500 total sessions** on ParkinAid's AI-assisted Parkinson's diagnosis app (web + mobile)
- Completed **"Hmong Community Health Access & Parkinson's Early Screening in Wisconsin: A Mixed-Methods Co-Design Study."**
- Organized 18 violin performances and 3 community runs, **raising $5.6K** to support education and access.
- Train **200** students on Parkinson's basics on campus, amplifying awareness within their families

2) **FTC Robotics Team 16460 — Captain (Gr12); Software Lead (Gr10–12)** **09/2022 – Present**
- Led controls/autonomous/CV development; Cut autonomous path variance 35% /failures 50%; Built data-driven scouting and match strategy, adding +10 points/match; Developed vision pipelines/testing harnesses.
- Mentored rookies through code reviews and driver practice, elevating team performance and reliability.

3) **AI Club — Cofounder& Editor-in-Chief** **01/2024 – Present**
- Led a 30-issue, biweekly AI newsletter (150+ readers) covering ethics, trends, and tools.
- Mentored 20+ through project development for science fairs—producing a WI CS 3rd and an ISEF 2025 Robotics 2nd. Curated guest lectures and hands-on workshops.

4) **French Honor Society & Independent Art-History Research** **09/2022 – Present**
- Studied 19th–20th-century Impressionism/Post-Impressionism (Manet, Monet, Van Gogh); produced bilingual talks linking language, history, and visual analysis.

5) **Python Instructor for local community** **06/2024-6/2025**
Led advanced beginner/intermediate Python sections (~10 students); Designed weekly modules and labs; Authored rubrics and auto-grading scripts; Ran code reviews and office hours; Mentored API/visualization mini-projects; Tracked progress and attendance; Improved completion rates +20% and reduced debugging time -30%.

SELECTED ATHLETICS & ARTS

1) **Running:** 100 miles/month, multiple half and full marathons. **6/2023-present**
2) **Violin:** Concertmaster (Gr11); Chamber Orchestra (Gr9–10); community performances. **2014-present**
3) **Athletics:** Soccer & Track (JV). **8/2022-present**
4) **Pool/Billiards:** League competitor; ~Top 5,000 FargoRate. **9/2022-present**
5) **Drawing & Drone Photography:** Personal portfolio and event coverage. **9/2022-present**

OTHER SKILLS

Programming: Python, Java; C++, MATLAB; HTML/CSS

ML/DS: NumPy, Pandas, Matplotlib, scikit-learn, TensorFlow, PyTorch

Tools: Git/GitHub; Swift/SwiftUI (intermediate)