

Samarth Khandelwal

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SUMMARY

Motivated and detail-oriented high school student with a passion for engineering, computer science, and AI development. Experienced in applying advanced concepts such as transformer models to real-world challenges, including social media analysis for emergency response. Recognized for leadership, collaboration, and impact, including contributing to raising over \$75,000 for cancer research and earning awards in national engineering and business competitions. Seeking opportunities to deepen expertise in AI, data science, and engineering innovation.

SKILLS

- Python (Intermediate–Advanced): Applied in AI research using transformer models
- SQL (Basic): Developed a student tracking database at Kumon Center
- JavaScript (Intermediate): Gained foundational knowledge during UC Early IT Camp
- Java (Intermediate): Employed in FRC robotics as the controls lead
- Excel: Used for data analysis including trends and attendance tracking
- Leadership & Team Management: Led AI research team and coordinated school initiatives
- Time Management & Organization: Balanced rigorous coursework with multiple roles
- Public Speaking & Presentation: Presented to UC faculty and at FBLA conferences
- Problem Solving & Creative Thinking: Applied AI tools to real-world and school settings

EDUCATION

Walnut Hills High School, Cincinnati, OH

High School Diploma **May 2027 (expected)** GPA: 3.9/4.0 (unweighted), 5.3 (weighted)

Key Courses: AP Chemistry, AP Biology, AP Calculus BC, AP Computer Science A, AP Research, AP US History

University of Cincinnati (CCP), Cincinnati, OH

GPA: 4.0/4.0

Courses: 19th Century Music, Statistics 1031, Nutrition 101

The Ohio State University (CCP), Columbus, OH

GPA: 4.0/4.0

Courses: Family Financial Management

Standardized Testing

SAT Score: Math: 780/800, Reading: 740/800, Composite: 1520/1600

WORK EXPERIENCE

Kumon Math & Reading Center, Liberty Township & Mason, OH

Center Assistant (Jan 2024 – Present) | Volunteer (Nov 2021 – Dec 2023)

- Managed the center during class hours and assigned digital coursework using Kumon Connect (the digital version of Kumon)
- Volunteered over 250 hours assisting students and grading materials

University of Cincinnati AI Research Internship

Research Project Team Lead, Experiential Learning Program (June 2025 – Aug 2025)

- Led a team to develop a transformer-based AI model analyzing social media for emergency services
- Presented project to faculty from UC and nearby universities during a regional poster session
- Earned “Most Impactful Research Project” award among six teams
- Earned “Leadership Prestige” award among 36 participants
- Received a recommendation letter from the CS Department Chair and lead investigator

Private Tutoring Sept 2024 – Current

- Provided one-on-one academic support independently and through Tutor Teens, totaling 20+ hours

Other Experiences:

- Early IT UC Summer Camp - June 2024
- GE Next Engineer Summer Camp June - July 2024
- UC CEAS Young Engineers Summer Camp - July 2024
- UC CEAS Rising Engineers Summer Camp - July 2025

EXTRACURRICULARS/AWARDS

- **Research Project** - AI Prediction of Alzheimer's miRNAs via Graph Embeddings (August 2025 – Present).

Developing a model to predict microRNA (miRNA) regulators implicated in Glioblastoma by engineering a **multiomics** network from public databases and applying bioinformatics methods to train a relational **graph convolutional network model**. Targeting submission to the Great Lakes Bioinformatics Conference as a conference paper, as well as ISEF and the Ohio Society of Science.

- **FIRST Robotics Challenge - Lakota Robotics Team 1038** – Autonomous Lead (Dec 2023 – Present). Programming and operating the robot for FIRST Robotics Competition Team 1038, writing Java control code and managing live telemetry during practice matches. Ensuring the timeliness and quality of deliverables to the robot manager and training new team members. Led the team to win the **Industrial Design Award** and **Impact award** at regional level competitions, securing qualification for the 2025 FIRST World Championship. Volunteering **40-50 hours** a year to assist in outreach events.

- **Ohio Attorney General's Teen Ambassador Board** – Group Lead (Sept 2025 – Present). Spearheading a statewide student committee across Ohio to advise the Attorney General on AI ethics in secondary education. Currently conducting surveys to assess the current state of AI-related academic dishonesty and have obtained representation from **20+ schools**. Additionally, drafting school policy recommendations with feedback from the **Ohio Attorney General's Higher Education Section**.

- **Leukemia & Lymphoma Society (LLS)** - Social Media Manager (Jan 2025 – April 2025). Co-managed a high-impact fundraising campaign that raised over \$75,000 for leukemia research. Executed a social media strategy that maximized donor engagement and community outreach.

- **Junior Engineering Technical Society (JETS)** – Team Lead (Aug 2023 – Present). Captained engineering team to place 1st in the 2023–24 essay section TSA and 8th overall out of 100+ teams statewide for TSA (Technology Student Association TEAMS (Tests of Engineering Aptitude, Mathematics, and Science). Placed in the **top 10 nationally** for the build challenge.

- **Future Business Leaders of America (FBLA)** – Chapter Officer (Aug 2024 – Present). Oversaw weekly meetings and assisted in planning travel to the National Fall Leadership Conference and State Leadership Conference. Ensured communication of competitive information and collaborated with fellow officers. Placed **5th** in Intro to Business Presentation and **5th** in Business Math. Planning on running as the State Webmaster during the 2026 State Leadership Conference

- **Diversity, Equity & Inclusion Council** – Committee Member (Aug 2022 – May 2025). Planned cultural events such as potlucks. Advocated for more diverse course offerings at the school fair. Handled **student discrimination** complaints reported to the council.

- **Student Congress Representative** (Aug 2023 – May 2024).

Organized schoolwide events including dances, movie nights, and pep rallies.

- **Student Ambassador** (Aug 2024 – Aug 2025).

Assisted in running school events such as orientations, reunions, and registration nights under the direction of the school administration.

- **Senior Orchestra** (Aug 2021 – May 2025).

Played the cello & piano at 11 concerts with **100+** attendees each. Served as the 2nd stand cello and certified **ABRSM Grade 5**.

- **Chess Club** – President (Aug 2022 -Aug 2025).

Leads weekly meetings and organizes competitive matches with other schools.

- **Junior Varsity Tennis & Cross Country** (Aug 2023 – Present).

Competed on the school's JV teams in matches and meets.

AWARDS

- **UC AI Research Internship:** Leadership Prestige Award; Most Impactful Research Project (Aug 2025)

- **TSA TEAMS (Ohio):** 1st Place Essay (2025), 1st Place Team Overall (2025)

- **TSA TEAMS (National):** Top 10 Build Challenge (2025)

- **FBLA (Ohio):** Top 5 Intro to Business Presentation; Top 5 Business Math (2025)

- **Kumon Mason-West:** Volunteer of the Summer (2024)

- **AP Scholar with Honors** - Took 4 APs and scored a 5 on AP PreCalculus and AP US History

- Walnut Hills High School: **Honor Roll** (2021–Present)

• **AP Capstone Diploma Candidate** - Requires a passing score of a “3” or higher on AP Seminar and AP Research, along with a minimum of 4 other AP classes. The AP Capstone program requires a 5000-word research paper completed under the guidance of an advisor in combination with an oral defense. Currently taking AP Research (June 2026).

- FRC Robotics **World Championship: Qualifier** (2025)

- FRC Robotics World Championship: **Top 4 for Coral** (2025)

- FRC Robotics Rocket City Regional: **Impact Award Winner** (2025)

REFERENCES

- **Denise Pfeiffer** - Chemistry Teacher

Email: pfeiffd@cpsboe.k12.oh.us

Phone Number: 513-363-8430

- **Nick Jarvis** - UC Research Advisor

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