Steven He

630-864-9456 | stevenhestudent@gmail.com

Technical Skills

Languages: Java, Python, JavaScript, HTML/CSS, PHP, SQL, C++
Technologies: PyTorch, Vue, JQuery, OOP

Education

Neuqua Valley High School Naperville, IL
GPA: 4.0 (Unweighted) 4.57 (Weighted) *Aug 2022 – Jun 2026*

- **Activities:** Math Team (Captain, Oralist), Science Olympiad (Captain, Varsity), Computing Team (Captain), DECA (Director of Written Events), Mixed Acapella Vocal Ensemble, Volleyball, Chicago Youth Symphony Orchestras, Steam Dream Team
- **Selected Coursework:** H Algebra II Trigonometry, H Precalculus, H Chemistry, AP Biology, AP Environmental Science, AP Computer Science A, AP Human Geography

Experience

LittleChineseChannel Jun 2020 – Sep 2020
Software Engineering Intern *Chicago, IL*

- Contributed full-stack code to a learning management system with 300+ active users
- Wrote, tested, and debugged dynamic SQL queries to manage customer data
- Developed dynamically generated PHP templates to display user analytics
- Designed interactive and animated learning exercises with Javascript and JQuery

Pyramid Academy of Gifted Youth Aug 2022 – Aug 2023
Teaching Assistant *Chicago, IL*

- Mentored middle schoolers at weekly office hours in ACSL (American Computer Science League)
- Developed curriculum for competitive programming classes in Java, Python, & C++
- Prepared and gave biweekly lectures to classes of 10+ students

Independent Jun 2023 – Jul 2023
Student Instructor *Naperville, IL*

- Initiated and organized ACSL summer camp for a group of 15+ students
- Developed a rigorous curriculum and created PowerPoint presentations
- Gave lectures and walked students through practice problems

Projects

Automatic Differentiation Engine | *Python, PyTorch*

- Implemented graph-based automatic differentiation based on Andrej Karpathy's Python micrograd
- Derived, implemented, and tested gradient expressions for various operators

Electroconductivity Probe | *Arduino*

- Built an electroconductivity probe to measure conductivity and salt concentration of unknown liquids
- Prototyped conductivity sensor using everyday household materials
- Calibrated device readings using exponential regression on empirical experiments
- Programmed Arduino to display real-time values from sensor readings

Multidirectional Robot Car | *Arduino*

- Created a multidirectional robot car to follow programmed paths
- Programmed to perform six different types of movements
- Calibrated to ensure precise movements and dynamically update speed based on time

Awards

USACO Silver Division
ICTM State Math Contest Orals (State Champion and Perfect Score 2024, 7th Place 2023)
DECA Illinois Career Development Conference (EIP State Champion 2024, MCS Finalist 2024, PFN Finalist 2023)
Science Olympiad Regional Medalist (1st Place in Three Events: Codebusters, Remote Sensing, Detector Building)
Science Olympiad State (4th Place Team Overall 2024)