

Isaac Chen

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EDUCATION

Union County Magnet High School

School for Science, Mathematics, and Technology

Sep. 2022 – Present

Scotch Plains, NJ

EXPERIENCE

Manufacturing Intern

Exothermic Molding Inc.

Aug. 2025 – Present

Kenilworth, NJ

- Work on various projects for product development and production. Developed skillsets related to problem solving, CAD, CAM, 3D GD&T, and reverse engineering.

CAD Intern

Airborne Quality Corporation

Mar. 2025 – Present

Online

- Developed detailed floor plans complete with provided filter information and locations from paper to CAD using AutoCAD. Improved ability to problem solve dimensions and provide quick turnarounds.

Freelance 3D Printing

Ender 3 & Ender 5 Plus

Jan. 2020 – Present

Hybrid

- Printed gifts, toys, safety devices and other housekeeping gadgets on demand. Ran a small 3d printing business through middle and high school.

PROJECTS

Team 1257 Robot Gary (FRC) | *AutoCAD, Fusion360, 3D Printing, CNC Milling/Lasercutting*

2025

- Designed a robot for the 2024-2025 First Robotics Competition: **Reefscape**. Had to meet certain specifications in weight and size while most effectively executing tasks of the game.
- Was one of three leads responsible for ideation, drafting, final design, and fabrication/assembly of the whole robot

Automated Screening of Bloodborne Viruses in Health Systems:

2025

Regional Model for Syndemic Testing | *Powerpoint, Excel*

- Analyzed data from automated hepatitis B and C and HIV screening program at Cooperman Barnabas Medical Center.
- Created poster for American Association for the Study of Liver Diseases meeting, Washington DC, November 2025. Given Poster of Distinction recognition

Board Game Design | *Fusion360, 3D Printing, CNC*

2024

- Led development and modeling of an original board game, using CAD for 3D design and advanced manufacturing for precise components.

Microcontroller Circuit | *Soldering, Electrical Schematics*

2024

- Wired, soldered, and programmed small devices to perform a simple function (clock, synthesizer, etc.) Soldered wires and electrical components to PCB based on electrical schematics.

Video Game - Hoard Fighter | *Java*

2025

- Utilized Java to create a game that involved programming skills and knowledge such as booleans, conditionals, while/for loops, arrays, and classes

DIY Kit Manufactured Car | *Fusion360 CAD & CAM, Lasercutting*

2025

- Designed full assembly of parts using a given stock size and programmed g-code for a lasercutter to manufacture it

- Wrote instructions to build the kit and documented design and troubleshooting process.

Architectural Design (TSA) | *AutoCAD, Fusion360, 3D Printing, CNC Milling/ Lasercutting* **2025**

- Designed and manufactured a model structure of a museum for the 2025 TSA (Technology Student Association) state competition.

TECHNICAL SKILLS

CAD: AutoCAD, Fusion360, Solidworks

CAM: Fusion360, Cura, Orca Slicer, Bambu Studio

CNC Operation & Programming: Tormach, ShopBot, Epilogue Laser Engraver

Electronics: Soldering, Arduino, PCB schematics

Programming: Java, limited C++

Data Analysis: Google Sheets, Excel, PowerPoint

CERTIFICATIONS

Autodesk Certified User: AutoCAD **2023**

Autodesk Certified User: Fusion **2024**

OSHA General Industry 10hr Certification **2025**

AWARDS AND RECOGNITIONS

Rookie Attitude Award (New Providence HS Marching Band) **2022**

AutoCAD Certified User **2023**

Fusion 360 Certified User **2024**

National Honor Society **2024**

American Mathematics Competition Nomination **2023, 2025**

1st Place Bridge Design: Civil Engineering and Design **2024**

Student of the Month **March 2025**

US II Historian Award (11th Grade) **2025**

LEADERSHIP AND PROFESSIONAL DEVELOPMENT

Hawthorne Caballeros Drum and Bugle Corps | *Tenor Drum Section Leader* **2024 – 2025**

- Led tenor drum section for 150 member drum corps, rehearsing Friday to Sunday (>15hrs) each weekend from April to August.
- Responsible for setup and tear down for various ensemble tasks including: equipment loading and prop dismantling.

FIRST Robotics Team 1257 | *Design Director* **2022 - 2023 | 2025 - Present**

- Use CAD, CAM, and CNC machines to design and manufacture competitive robot and other items
- 2024-2025 season, the team won the Industrial Design award at Bensalem and placed 27th/139th at the Mid-Atlantic District Championships

Center for Asian Health, Cooperman Barnabas Medical Center, RWJBarnabas Health **2024 - Present**

- Assisted with community health fairs and supported local events and provided administrative support to primary care practice.
- Research assistant for hepatitis screening and linkage-to-care program

CLUBS AND ACTIVITIES

National Honor Society	2024 – Present
<ul style="list-style-type: none">• Tutor fellow students and help volunteer/organize blood drives as well as other events	
Relay for Life	2023 – Present
<ul style="list-style-type: none">• Fundraised over \$1,000 from 2023-2024 and \$3000 from 2024-2025 as a team for cancer research and support	
No Place For Hate	2024 – Present
<ul style="list-style-type: none">• Supported campus inclusivity & mental health initiative through school-wide awareness campaign. Developed club bulletin board and distributed posters.	
New Providence High School Marching Band <i>Percussion Captain</i>	2022 – Present
New Providence High School Musical	2022 – 2024

SPORTS

New Providence High School Varsity Cross Country <i>Boys Captain</i>	2022 – Present
Junior Varsity Lacrosse	2022 – 2024
Junior Winter Track	2022 – 2023

VOLUNTEERING

New Providence Presbyterian Church <i>Production Team, Salt Band</i>	2020 – Present
<ul style="list-style-type: none">• Operated camera and soundboard for Sunday services.• Play percussion for church highschool worship band.	
Writing Wizards <i>Technology Coordinator</i>	2023 – Present
STEAMSharks <i>Legal & Technology Organizer</i>	2023 – Present