Sami Sharif

(347) 804-1813 • ssharif@andrew.cmu.edu • linkedin.com/in/sami-sharif1

EDUCATION

Carnegie Mellon University, Pittsburgh, PA — May 2028
Bachelor of Science in Engineering (Undeclared)

Townsend Harris High School, Flushing, NY — June 2024
High School Diploma — GPA: 4.0

SKILLS

Programming Languages: C++, Java, Python, Lua, C#, Dart
Tools and Frameworks: Unity, Roblox Studio, Procreate, Flutter, Pygame, Arduino, OpenCV, Streamlit, OpenAI, MATLAB, Onshape, 3D Printing, Laser cutting

PROJECT EXPERIENCE

NOVA Hackathon | Hackathon — November 2024
- Won 1st place of 42 teams in Carnegie Mellon's ScottyLabs Hackathon by using the OpenAI API to generate test questions from an uploaded note file and provide feedback to user's answers
- Implemented a spaced repetition algorithm to inform what questions to ask based on a heatmap of user's understanding of different parts of the document uploaded
- Won the Everyday Impact Award sponsored by Sandia National Laboratories

Red Robot Hackathon | Hackathon — November 2024
- Won 1st place in Carnegie Mellon's Roboclub Hackathon by designing and manufacturing a robot with a 4-bar linkage lift to stack and deliver objects
- Won the Autonomous Award sponsored by Caterpillar for an autonomous routine using feedback control and an IR sensor to follow a path

Autonomous Robot Simulator | Personal Project — August 2024
- Remodeled, animated, and added controls to FRC 118's 2022 robot within a custom robot simulator leveraging Unity
- Developed a reliable launching algorithm based on calculus and kinematics, now utilized in FRC 2601's simulations
- Integrated an A* pathfinding algorithm and a streamlined solution to the traveling salesman problem, allowing robot to autonomously create and follow trajectories

Enigma | Personal Project — July 2023
- Created user interface and backend for an app to practice decoding common ciphers from the Science Olympiad, utilizing the Flutter framework
- Implemented a monoalphabetic substitution solver algorithm in Dart to automatically decode Aristocrat ciphers

The Spy | Personal Project — December 2021
- Developed a 10-player multiplayer game in Roblox Studio, accumulating over 100 plays
- Integrated custom animations in game GUI using Roblox's tweening library and Procreate

WORK EXPERIENCE

Wright's Resumes and Connections, Flushing, NY — March 2022 - May 2022
IT Support Intern
- Designed a 16-topic Python programming curriculum in Google Slides for future employees and clients
- Compiled a 3-hour lecture featuring interactive programming examples and the NumPy package using iMovie

ACTIVITIES & LEADERSHIP EXPERIENCE

Robotics (FRC 2601), Townsend Harris High School — September 2021 - May 2024
Programming Head (2023 - 2024) & Driver (2021 - 2024)
- Revamped team's legacy coding framework, implementing a command-based structure with safer control of interconnected mechanisms, improved modularity, and a 70% decrease in CAN bus utilization
- Designed team's programming curriculum and handbook to introduce 30+ members to Java and control theory
- Drove robot in high-intensity matches at all competitions, leading to 2 competition wins and 2 finalist placements

Science Olympiad, Townsend Harris High School — September 2022 - March 2024
Event Expert (1 year) & Competitor (2 years)
- Hosted study sessions at least three times a week, leading to a 1st place finish at regional competition and 2nd place finish at NY state competition in Codebusters