

# Amir Afiq Mohd Ariff

(814) 414-2044 | [amirafiqariff@gmail.com](mailto:amirafiqariff@gmail.com) | [amirafiqportfolio.work](http://amirafiqportfolio.work)

## EDUCATION

### The Pennsylvania State University

*College of Engineering*

Bachelor of Science in Computer Science

Minor in Cybersecurity

University Park, PA

*Anticipated Graduation: May 2026*

GPA: 3.60/4.00

## PROJECT EXPERIENCE

### ASL Hand Gesture Recognition System

Jan 2026

- Developed a real time American Sign Language recognition system that runs in real time using PyTorch, OpenCV, and MediaPipe.
- Collected hand movement data and trained a deep learning model to recognize simple hand ASL gestures such as please, no, thanks, hello, and goodbye.

### Blackjack Reinforcement Learning Agent

Nov 2025

- Built an AI agent capable of learning optimal Blackjack strategy through self-play and reinforcement learning.
- Reached a stable win rate of approximately 42 percent across large-scale simulations, matching optimal theoretical performance.

### Formula One Data Management System

Nov 2025

- Designed and implemented a MySQL database modeling real world Formula One entities and their relationships across multiple tables.
- Built a Python backend and Streamlit frontend to populate, query, and visualize motorsport data from CSV files and public APIs.

### Autonomous Pathfinder Robot

Apr 2025

- Designed and developed an Arduino-powered autonomous robot that follows a black path using a color sensor and avoids obstacles with an ultrasonic sensor.
- Implemented recovery logic that enables the robot to reorient itself when off-track through progressive scanning and directional correction.

### Intelligent Task Planner Web Application

Mar 2025

- Built a full-stack productivity web app that transforms user-entered tasks into structured, editable workflows using OpenAI's language model.
- Integrated Flask for backend API routes, deployed on Render, and connected to a Vercel-hosted frontend.

## WORK EXPERIENCE

### Penn State Center for the Performing Arts

University Park, PA

*Front-of-House Event Staff*

Aug 2024 – Present

- Assisted in seating and ticket verification for events with 1000+ attendees, ensuring a smooth check-in process.
- Addressed an average of 50+ guest inquiries per event, providing clear guidance and enhancing the audience's experience.

### Penn State Residential Dining

University Park, PA

*Dining Hall Worker*

Oct 2022 – May 2024

- Served an average of 500+ students per shift, maintaining a fast-paced yet welcoming dining environment.
- Implemented an organized system for tracking supplies, reducing waste by 15% and improving cost-effectiveness.

## SKILLS

**Languages:** C, C++, Python, Java, Bash, JavaScript, HTML, CSS, SQL

**Frameworks and Libraries:** PyTorch, OpenCV, MediaPipe, React, Node.js, Flask, Streamlit

**Tools and Platforms:** Git, Vercel, Render, PostgreSQL, MySQL, SQLite, Wireshark, REST APIs

**Spoken Languages:** English, Malay