

Amir Afiq Mohd Ariff

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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