Emil Jiang

emil@jjey.com - eyj7@cornell.edu - emiljiang.com - 3013568087

EDUCATION

Cornell University, Ithaca, New York   Expected Graduation May 2026
Bachelor of Arts, Computer Science
- **Relevant Coursework:** Algorithms, Computer System, Functional Programming, OOP and Data Structures, Discrete Math, Linear Algebra

WORK EXPERIENCE

Johns Hopkins University Applied Physics Laboratory - Software Engineer Intern   Summer 2024 - Present
Project 1: Sensor Data Integration and Networking for Aircraft
- Integrated sensor data to enhance decision-making for pilots and aircraft personnel
- Engineered Podman containers to reduce the space required for system compatibility and enhancing efficiency
- Developed software capable of autonomously identifying and connecting with other systems to optimize pilot workload
- Conducted research on the possibilities of using LLMs to communicate pilot intent directly to UAVs to provide real-time assistance to Navy pilots

Project 2: Real-Time Video Data Labeling
- Automatically generated labeled data from video feeds for computer vision applications, leveraging YOLOv10 and OpenCV
- Designed and coded an interactive Unity application, allowing real-time testing and validation of the developed software

Johns Hopkins General Hospital - JHSJP Intern   Summer 2023
- Assisted radiology department in performing a wide range of diagnostic imaging procedures
- Positioned patients correctly and ensured their comfort and safety during imaging procedures
- Collaborated closely with the radiology members to ensure efficient workflow and timely patient care

Johns Hopkins University Applied Physics Laboratory - ASPIRE Intern   Summer 2021 - Spring 2022
- Researched latest advancements in autonomous driving technology
- Designed and constructed an autonomous vehicle, leveraging a Raspberry Pi as the central processing unit
- Implemented algorithms for real-time video analysis to enable the autonomous vehicle to recognize and respond to its surroundings, ensuring precise vehicle positioning and movement control
- Collaborated with a mentor to enhance the system's capabilities and authored a paper documenting my research

PROJECTS

AI Class Scheduler
- Leveraged OpenAI's LLM and API to gather user preferences
- Designed and implemented an algorithm to align class recommendations with user interests
- Created a comprehensive GUI and integrated all components using OCaml

ASL Soundboard and Translator
- Engineered a soundboard which allows people with hearing loss to communicate with others
- Developed an IOS app paired with the hardware which allows back and forth communication as well as Speech to Text
- Utilized a neural network to create an ASL translator which got 96% accuracy with images and 52% accuracy with live video

Connect Four AI
- Coded a Connect four game with multiple customizations and a computer mini-max AI with a 95% win rate

EXTRACURRICULAR

PoRTaL Lab Researcher
- Conducted research on imitation learning, decision-making, and human-robot interaction in household robots
- Developed methods to transfer human video to robot video, enhancing test data for model training

Centennial CyberPatriot
- Managed 2 teams and competed in cybersecurity competitions: secured Windows servers and completed Cisco challenges

FTC Robotics
- Coded autonomous pathing and PID controllers to move a robot to accomplish different tasks for competitions achieving state level

Python Pyoneers
- Taught python classes to high school and middle school students
- Organized and ran multiple regional coding competitions for students of all ages

SKILLS

- Python, Java, C++, HTML, CSS, Javascript, Swift, Microsoft Office, Git, R, React JS, OCaml, Unity
- Fluent in Chinese and intermediate proficiency in Spanish and Italian
- Viola(Senior All-state, Baltimore Youth Symphony Orchestra, and Howard County GT Orchestra)
- Soccer(High School Varsity, SAC club travel team)