YunHao Dong

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EDUCATION

New York University, Tandon School of Engineering, Brooklyn, NY — Expected Graduation: May 2026
Bachelor of Science, Computer Engineering | GPA: 3.939 | Dean's List
Relevant Courses: Data Structures & Algorithms, Object Oriented Programming, Digital Logic, Circuits, Electronics 1, Embedded Systems, Databases, Computer Architecture

EXPERIENCE

NYU Tandon Media Services, *Student Assistant,* Brooklyn, NY — Sep 2023 - Present
- Delivered active audiovisual support and troubleshoot technical equipments for 10+ spaces in NYU Tandon daily
- Attended biweekly workshops for training on more advanced AV equipment set up for large scale events

NYU Undergraduate Summer Research Program, *Student Researcher,* Brooklyn, NY — Jun 2023 - Aug 2023
- Integrated C# scripts for game objects, UDP protocol, and Python computer vision to track hand movements across webcam with 90% accuracy in Unity
- Designed a wristband PCB to gather tendon data from hand gestures, reducing prototype size by 40%
- Collaborated with 4 student researchers to develop a frame for stabilize data collection using Ultraleap Camera

NYU Robotics Design Team, *Systems Engineer*, Brooklyn, NY — Jan 2024 - Present
- Developed embedded code for controlling robot in manual & autonomous operations in NASA's Lunabotics Competition
- Optimized I2C communication in Linux between NVIDIA Jetson with Teensy, reducing latency by 30%
- Engaged with 4 subsystems leads in weekly meetings to coordinate design implementation, constraints and intersystem integration, increasing operational efficiency by 20%
- Achieved first place in University-wide research exhibition for the Vertically Integrated Projects Category among 30+ projects

Electrical Team Member — Sep 2022 - Jan 2024
- Tested and programmed Brushless DC motors, hall effect, rotary encoder, and load cell sensors for data acquisition
- Interfaced Raspberry Pi with Teensy through I2C for data and command transfer, enabling wireless control
- Prepared and presented outreach lessons regarding Arduino and Python to local middle schools with 30+ teenagers

Doris Dev, *Engineer Intern,* Brooklyn, NY — Jun 2022 - Aug 2022
- Collaborated with design engineers to prototype CAD models of consumer products using OnShape
- Evaluated 20+ consumer products to outline market standards and brainstorm better designs elements for market competition

PROJECTS

PetPlatter — Jul 2024 - Aug 2024
- Built a Websocket server on AWS EC2 to facilitate real time communication to control a pet feeding device, establishing low-latency interaction between clients
- Implemented a user-friendly iOS app to control device for feeding food and monitor water availability
- Configured ESP32 to handle incoming WebSocket messages and execute commands on servos and liquid pump

SecureMotion — Jun 2024 - Jul 2024
- Developed iOS app with swift for real-time home security monitoring and control, utilizing MQTT for bidirectional communication and ESP32 microcontroller for feedback
- Enhanced IoT communication protocol by integrating an authentication mechanism to ensure data privacy
- Streamlined message handling for effective data transmission, resulting in improved system performance by 20%

DataPulse — May 2024 - Jun 2024
- Created Python script for real-time sensor data collection via Bluetooth LE, logging to CSV file with 95% success rate
- Programmed Arduino Nano 33 BLE to advertise services and transmit data through Bluetooth LE reliably
- Automated analysis of CSV files with python, using Matplotlib to produce line plot visualizations for stakeholders

SKILLS

- Languages: Python, C++, C, C#, HTML, CSS, Swift
- Systems Engineering, Embedded System, Linux, IoT, Hardware Design, OnShape, Altium, Unity