

Ishaan Singh

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Education

New York Institute of Technology
B.S. in Electrical and Computer Engineering

GPA: 3.9

Experience

Product Engineer

Jan 2025 – Present

Niura, New York City, NY

- Developed and debugged firmware for STM32 microcontrollers, integrating with CC256x modules for simultaneous audio and data transmission over Bluetooth.
- Designed multiple custom PCBs using Altium Designer, optimizing for low-noise signal acquisition and embedded integration.
- Built a fully functional mobile app to interface with custom hardware via Bluetooth; enabled real-time EEG streaming and user interaction.
- Created the official company website to showcase product features, streamline user onboarding, and improve brand visibility.
- Successfully integrated a prototype EEG earbud with the mobile app for real-time visualization and analysis.
- Conducted brain scans using a 32-electrode Emotiv EEG cap to validate signal acquisition and user interface flow.
- Represented the company at a startup competition hosted at Harvard, delivering a pitch on product innovation and market impact.

Information Technology Intern

Jul 2023 – Aug 2023

Drew Marine Inc., Whippany, NJ

- Maintained and developed PowerApps applications for internal data management.
- Extracted and updated data in SQL Server.
- Delivered tools that improved workflow efficiency and productivity.

Student Systems Analyst

Nov 2022 – Dec 2024

New York Institute of Technology

- Resolved hardware/software issues and updated system installations.
- Provided technical support and query resolution across departments.

Research Assistant

Oct 2022 – Oct 2023

NYIT Undergraduate Research Program

- Created circuits using Verilog and designed ASICs for prototyping.
- Managed two circuit designs submitted for Tiny Tapeout 2.

Projects

ChatGPT Sentiment Analyzer (Python)

- Developed a sentiment analysis engine for ChatGPT from scratch using natural language processing techniques.
- Collected, cleaned, and structured emotional datasets from open-source databases to train the model.
- Enabled emotion-aware responses by classifying user sentiment with 53% accuracy in real-time interaction.

Medical Walker (Hardware)

- Engineered a smart walker to assist individuals with diminished fine motor skills in rehabilitation scenarios.
- Integrated ultrasonic sensors for obstacle detection and a 3-axis accelerometer for motion tracking.
- Demonstrated functional prototype at NJIT Hackathon, showcasing real-world therapeutic use cases.

Skills & Affiliations

Technical: Simulink, AutoCAD, STM32, Java, MATLAB, JavaScript, Arduino, CC256, Control Systems

Affiliations: IEEE, SASA

Website



LinkedIn

