

ALEXANDER ESCOBAR

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EDUCATION

New York University, Tandon School of Engineering, Brooklyn, NY

Bachelor of Science in Computer Engineering

Clubs / Activities: GLASS, HEOP, SHPE, MyBK@T

Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming, Comp. Architecture, Intro. To Databases, Fund. Of Electric Circuits, Electronics, Digital Logic, Multivariable Calculus, Data Analysis

EXPERIENCE & PROJECTS

Machine Learning Intern | Python · NumPy · OpenCV · Pandas · Matplotlib May 2025 – Aug 2025
HP Inc. Boise, ID

- Engineered new feature vectors that detected scan streaks with a 95% accuracy, significantly improving diagnostic reliability
- Designed classification methods that not only identified streak types but also provided actionable solutions for consumers, reducing the need for on-site field service
- Applied computer vision techniques within machine learning algorithms to improve streak detection accuracy in scanned images
- Contributed directly to production-level algorithms deployed in HP printers with imaging diagnostic capabilities

Parkinson's Detection Device | Arduino · C++ · Accelerometer Jan 2025 – May 2025

- Built an embedded device integrating a 3-axis accelerometer and gyroscope to detect Parkinson's-related tremors (3–5 Hz) and dyskinesia (5–7 Hz) using motion-frequency analysis
- Implemented C++ algorithms for motion-data filtering and pattern recognition, achieving a 90% detection accuracy
- Leveraged Fast Fourier Transform (FFT) analysis to isolate tremor signatures from ambient movement noise, enhancing diagnostic precision and device reliability

Global Career Accelerator | Python · SQL · Tableau · Excel May 2024 – Aug 2024

- Developed strong data analytic skills through real-world projects and collaborative learning
- Mastered SQL techniques for efficient data wrangling and applied Python for in-depth data analysis
- Applied advanced analytics to identify key trends in the data “Analysis for Sustainability” and “Website Audience Analysis” Projects

RoboChess | Arduino · C++ Sept 2022 – Dec 2022

- Designed the software architecture of a smart chessboard in Arduino
- Delivered the “RoboChess” project within the established timeline, exceeding client expectation and winning the Gunter Georgi Award
- Utilized microcontroller programming with Arduino to integrate physical components for real-world chess piece movement, enhancing the project's interactive and educational aspects

LEADERSHIP AND PROFESSIONAL DEVELOPMENT

Career Prep Fellow Oct 2023 - Present
Management Leadership For Tomorrow Bethesda, MD

- Selected among thousands of high-achieving applicants to participate in a non-profit organization that provides career and leadership development programs for underrepresented minorities

Global Leaders and Scholars in Stem (GLASS) Sept 2023 – Present
New York University Tandon Brooklyn, NY

- Work closely with the 17 Sustainable Development Goals learning to integrate them within my professional development and career goals
- Participated in global activities such as a semester abroad in Abu Dhabi and service trips in foreign countries
- Designed to develop leadership, global competency, academic excellence, a commitment to service, and professional development

Peer Mentor June 2024 – May 2025
The Academy Charter High School Hempstead, NY

- Guiding 25 first-year students through their transition from high school to college, offering mentorship that fosters academic and personal growth
- Facilitating financial aid planning and helping students navigate campus resources such as tutoring services, student clubs, and wellness programs
- Conducting weekly check-ins to track progress, address concerns, and offer personalized support to each student's needs

SKILLS AND AWARDS

Skills: Proficient: Python, C++, SQL, Verilog Familiar: VEX

Awards: NYU Gunter Georgi Award