

Brandon Vazquez Munoz

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Education

Cornell University, College of Engineering – GPA: 3.535 / 4.0 Aug 2023 – May 2027
Bachelor of Science in Computer Science, Minor in Physics Ithaca, NY

- **Relevant Courses:** Analysis of Algorithms, Machine Learning, Computer System Organization, Functional Programming, Object-Oriented Programming & Data Structures, Linear Algebra, Multivariable Calculus, Probability & Statistics I & II

Work Experience

Cornell University Unmanned Air Systems, Ithaca, NY Oct 2023 – Present
Machine Learning Engineer | *Python, PyTorch, YOLO, SAHI, Gymnasium*

- Devised a 360 degree LiDAR-based obstacle detection system using DBSCAN clustering to enhance UAV flight safety
- Developed a path-planning reinforcement learning agent in Gymnasium using Stable Baselines, achieving 99% task success
- Trained YOLO + SAHI models with transfer learning to detect alphanumeric targets (98% accuracy)

434 Media Group, San Antonio, TX May 2025 – Sep 2025
Software Engineering Intern | *React.js, JavaScript, Python, Meta Graph API, Airtable API*

- Led the redesign of Digital Canvas using React.js and JavaScript, delivering 3 production-ready UI prototypes to leadership
- Restructured legacy architecture while enhancing analytics with Meta Graph API + Google Analytics, modernizing CMS workflows and centralizing insights across 7+ managed sites
- Automated sales lead generation with web scraping, ChatGPT API, and Airtable API, reducing research/data entry time by up to 70% through prospecting, email generation, and lead storage

LinkedIn, New York, NY May 2024 – May 2025
Full Stack Engineer Intern | *React.js, Node.js, Python, Supabase, Whisper*

- Optimized an audio-to-transcription-to-feedback pipeline using OpenAI Whisper, Python backend, and Supabase, cutting average response latency by 58% (60s → 25s) and improving real-time usability for interview simulations
- Designed an interactive interview interface in React.js and Node.js, simulating interviews and providing real-time LLM-driven feedback; tested with 20+ MVP users
- Collaborated in 10 months of weekly code reviews and progress updates with senior LinkedIn engineers, receiving feedback on design decisions, debugging strategies, and scalable system practices

Citadel Securities, New York, NY May 2024 – Aug 2024
Software Engineering Extern | *Python, Django, JavaScript, Yahoo Finance API, Gemini API*

- Spearheaded a full-stack stock comparison platform using Django, JavaScript, and Python, integrating Yahoo Finance and Gemini AI APIs to analyze 6 key indicators (SMA, EMA, RSI, etc.) and deliver maximum profit scenarios
- Completed 25+ hours/week of instructor-led data structures and algorithms workshops, alongside 10+ finance courses covering market structure, asset classes, hedge fund strategies, and quantitative modeling
- Engaged with Citadel engineers and senior leadership through mentorship, project reviews, and talks focused on fintech

Projects

EchoAce (LinkedIn Best Project Award) | *React.js, Node.js, Python, Supabase* Apr 2024 – Present

- Constructed an LLM-powered behavioral interview simulator supporting 100+ languages, incorporating user data into AI feedback to guide how experiences can be woven into responses
- Integrated a speech-to-text pipeline with OpenAI Whisper + Python backend, cutting latency by 58% for smoother practice sessions; Tested with 20+ students, achieving 92% positive feedback
- Implemented a React.js + Node.js frontend with user authentication and Supabase-backed storage

Portfolio Website | *React.js, Spline, CSS, GitHub Pages* Jun 2025 – Present

- Built a React-based portfolio site showcasing projects and experience, featuring 3D visuals with Spline and fully responsive dark/light theming (Deployed via GitHub Pages <https://brandon-vazquez.github.io/>)

Scrabble-Inspired Multiplayer Game | *OCaml* Apr 2025 – May 2025

- Programmed core game mechanics in OCaml (randomized letter distribution, rack management, placement/removal validation) with a testing suite achieving 90% line coverage
- Engineered a turn-based multiplayer system supporting 4 users, optimized board updates to cut move validation time by 30%

Technical Skills

Programming Languages & Frameworks: Python, Java, JavaScript, OCaml, C, HTML, CSS, React.js, Node.js, Flask

Libraries & Tools: PyTorch, OpenCV, NumPy, Pandas, Scikit-learn, Stable Baselines, Supabase, Matplotlib, Git, Bootstrap