Ved Borade

https://vedbo.github.io/ | ved.borade@rutgers.edu | https://www.linkedin.com/in/vedb

Rutgers University- New Brunswick Honors College B.S in Computer Science + Data Science
Expected Graduation: Dec 2027 Dean's List Fall 2024 + Spring 2025
Relevant Coursework: Data Structures, Computer Architecture, Linear Algebra, Data 101, Discrete Structures
Skills: Python, Java, C, GML, Swift, Git, OpenCV, Arduino, Raspberry Pi, Q#, CAD Modeling, EasyEDA circuits

Experience

Aresty Research Assistant Program in Computational Robotics at Rutgers University **Aug 2025 –Present**

- Develop and evaluate collision-free motion planning algorithms in physics-based robot simulations, with an eventual transfer to a real robotic platform.
- Apply algorithmic and machine learning methods using Python for robot control and performance evaluation.
- Collaborate with PhD researchers, presenting weekly findings through technical reports in group meetings.

Apple Inc., Freehold, NJ **Jul 2025 –Present**

- Delivered support by troubleshooting devices, guiding product selection, conducting business consultations, and preparing customers for Genius Bar appointments through software and hardware diagnostics.

Massachusetts Institute of Technology Lincoln Laboratory Summer Institute + T.A. for Fall **Jul 2023 – Dec 2023**

- Designed and presented an application-specific integrated circuit (ASIC) chip for air quality monitoring using the Chipyard framework at the BWSI Final Live Event.
- Studied photonics, HDL gate design, and ASIC design through hands-on coursework and projects.
- Developed and pitched a $10,000 funding proposal to a panel of industry experts from SOFWERX.
- Selected to engineer a hand-held gaming PCB, distributed to classmates, powered by an ATtiny85 microcontroller.

Jetson - Project Intern **Jun 2023 – Aug 2023**

- QA tested beta features of the mobile application, resulting in 0 reported app bugs in the live version of the app
- Prototyped wireframes in Figma and Swift and presented weekly findings to mentors
- Contributed to new app features that increased daily engagement by +5% and increased day one retention by +9%
- Designed future app development feature lists for mobile applications and presented them directly to company executives

YouEngineering Club + National Computer Science Honor Society- President **Sep 2022 - Jun 2024**

- Coached weekly engineering lessons in Arduino programming, Robotics, and circuitry.
- Engineered a five-foot animatronic Santa display, integrating servo-motors into a chassis for waving functionality.

New York University Tandon School of Engineering Cyber Security Student **Jul 2022 - Aug 2022**

- Utilized custom Python scripts to perform network analysis, identifying security threats and anomalies in systems.
- Reverse-engineered malware samples to understand behaviors and develop detection methods

Projects

Epi-Sense: Epileptic Seizure Sensor

- Developed a wearable device with an ESP32 microcontroller and biometric sensors (skin conductivity, motion) for real-time epileptic seizure detection.
- Integrated Firebase backend for data analysis, delivering instant alerts via iPhone/Apple Watch apps to caregivers.

Robotic Service Dog

- Engineered an indoor robotic service dog with autonomous navigation (mapping technologies, microcontrollers) and a C-programmed robotic hand for assistive applications using Arduino.

Predictive Classification of NBA Player Career Longevity

- Developed a Gradient Boosted Classification model to predict NBA player longevity, achieving a 91.45% accuracy to inform team scouting and investment strategies.

Awards

- **CodePath Scholar:** Received after successful completion of CodePath's TIP-102 Data Structures Course
- **2 District Gold Medals in the Jersey City Medical Center/RWJ Barnabas Health STEM Showcase**
  - Micro-Embedded Systems Category: Engineered a robotic service dog with autonomous navigation (mapping technologies, microcontrollers) and a robotic hand for assistive applications using Arduino and C.
  - Electrical & Mechanical Category: Optimized structural models (incl. tuned mass dampers) to mitigate earthquake effects; received a citation of recognition from Jersey City Council member Solomon.
- **Depository Trust & Clearing Corporation (DTCC) - Rising Star Student**
- **National CyberScholar 2023 + 2024**
- **5x Hackathon Winner https://devpost.com/vedmborade**