

# Ved Borade

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## EDUCATION

### Rutgers University - Honors College

B.S. Computer Science & B.S. Data Science

New Brunswick, NJ

Expected May 2027

- **Awards:** 5x Hackathon Winner, 2x District STEM Showcase Gold Medalist, 2x National CyberScholar, Dean's List, CodePath Scholar, DTCC Rising Star, AP Scholar with Distinction

- **Relevant Coursework:** Data Structures, Computer Architecture, Linear Algebra, Data 101, Discrete Structures

## TECHNICAL SKILLS

**Languages:** Python, Java, C, C++, Swift, SQL, JavaScript, GML

**Frameworks & Libraries:** React, SwiftUI, UIKit, TensorFlow, PyTorch, OpenCV, NumPy, Pandas, Matplotlib, Scikit-learn, XGBoost, Plotly

**Hardware/Embedded:** Arduino, Raspberry Pi, ESP32, FPGA, Bluetooth, IoT, I2C/SPI, Soldering, CAD, EasyEDA

**Developer Tools:** Git, Firebase, Xcode, Android Studio, Jupyter Notebook, Chipyard, Gurobi, AWS, JUnit, GDB

## EXPERIENCE

### Arestry Research Assistant | Computational Robotics @ Rutgers PRACSYS Lab

Aug 2025 – Present

- Developing Integer Linear Programming (ILP) and **Gurobi** algorithms for shelf placement on the **UR5** robotic platform.
- Engineering a **3D** data pipeline to map retail datasets into simulation instances to maximize label visibility.
- Applying **Python/Plotly** for performance evaluation and collaborating with PhD researchers to present visibility benchmarks and **Reinforcement Learning** (RL) baselines in weekly technical meetings.

### Apple Inc. | Specialist @ Apple – Freehold, NJ

Jul 2025 – Oct 2025

- Generated over **\$100,000** in revenue by providing tailored product solutions and technical guidance to customers.
- Diagnosed software/hardware issues and performed pre-appointment troubleshooting for Genius Bar appointments.

### MIT Lincoln Laboratory | BWSI ASIC Design Scholar @ Lexington, MA

Jul 2023 – Dec 2023

- Designed an **ASIC** chip for air quality monitoring using **Chipyard** and mentored as a **Teaching Assistant** during Fall.
- Developed and pitched a **\$10,000** funding proposal to a panel of industry experts from SOFWERX.

### Jetson | Product Intern

Jun 2023 – Aug 2023

- QA tested beta features achieving **0** production bugs and prototyped wireframes in Figma and Swift.
- Contributed to features increasing daily engagement by **5%** and day-one retention by **9%**.

### NYU Tandon School of Engineering | Cyber Security Program @ Brooklyn, NY

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 (Wearable Seizure Detection) | ESP32, C++, Firebase, Swift

Hackathon Winner

- Developed a biometric wearable for real-time seizure detection with a custom Firebase-integrated iOS & WatchOS app.

### Robotic Service Dog | Arduino, C, Ultrasonic Sensors, 3D Printing

STEM Showcase Gold Winner

- Engineered an autonomous service robot featuring a custom-programmed robotic hand and indoor navigation.

### NBA Player Longevity Model | Python, Scikit-learn, Pandas, XGBoost

Data 101 Capstone Project

- Built a machine learning model to predict NBA player longevity with 91.45% accuracy.

## LEADERSHIP & ACTIVITIES

### Rutgers Org. of Cloud Computing (ROCC) | Executive Board Member

Jan 2026 – Present

- Spearheading cloud curriculum development to upskill members in AWS and Azure architecture.

### Road to Silicon V/Alley (RSVP) | Cohort 7 Member

Nov 2025 – Present

- Selected for technical leadership training featuring intensive C-Suite mentorship and startup modeling.

### National Computer Science Honor Society | President

Sep 2022 – Jun 2024

- Coached lessons in engineering and circuitry for 50+ students and designed a 4ft Santa animatronic display.

## VOLUNTEERING

### NASA International Space Apps Challenge | Technical Mentor

2023 & 2024

- Advised participants at a global hackathon for **93,000+** registrants across **150+** countries.

### Invited Judge | Regional STEM Competitions

2022 – Present

- Evaluated engineering prototypes and software for Liberty Science Center and science fairs.