Joffre Loor

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Education

Rutgers University New Brunswick, NJ

BS in Computer Science and BS in Data Science, GPA: 3.81/4 *Expected: December 2026*

- **Relevant Coursework**: Data Structures (A), Computer Architecture (A), Algorithm Design & Analysis (A), Discrete Structures (A), Calculus III (A), Data Management (A)

Technical Skills

Languages: Python, Java, JavaScript, TypeScript, C#, C, SQL, R, HTML, CSS
Frameworks & Libraries: React, Node.js, FastAPI, React Native, Selenium, BeautifulSoup, NumPy, Pandas, OpenCV, PyTorch
Tools & Technologies: Git, GitHub, Docker, CI/CD, AWS EC2, Cloudflare Workers, PostgreSQL, Postman, VS Code
Interests & Activities: Rocket Propulsion Lab, Mobile App Development Club, HackRU, Soccer, Weightlifting, Cooking

Experience

Embedded Machine Learning Engineer September 2025 – Present

Rocket Propulsion Lab - Payload Systems Team *New Brunswick, NJ*

- Built a Python automation pipeline to run 300+ OpenRocket flight simulations and generate force datasets.
- Trained a PyTorch linear regression model achieving 91% accuracy in predicting in-flight loads for payload tightening.
- Converted the trained Python model into C and embedded it into the rocket's payload system on an Arduino module.

Full Stack Software Engineer Intern June 2025 – Present

NorCast Media Group *Grenloch, NJ*

- Architected PostgreSQL systems for auth and pipelines, managing 2M+ geolocated weather points across 50+ parameters.
- Integrated National Weather Service (NWS), ECMWF, HRRR, and NBM data and APIs with less than 500ms latency.
- Deployed a scalable backend linking APIs, databases, and clients with 99.9% uptime and secure cross-platform sync.

Software Engineer and Co-Founder December 2024 – Present

Sibling Software LLC *Hasbrouck Heights, NJ*

- Co-founded and led backend development for Vigil, a cross-platform mobile app built with React Native, Expo, and Node.js, managing 100,000+ rows of course data for monitoring real-time course openings.
- Designed a serverless architecture using Cloudflare Workers and Supabase, reducing cloud costs by 75% and delivering real-time API polling across 300+ global edge locations.
- Implemented authentication and subscriptions with event-driven logic, cutting latency by 70% and improving scalability.

Projects

Lucid – AI-Powered Visualizer | *React, Next.js, FastAPI, Manim* October 2024

- Directed a 4-person team to 1st place among 400+ participants at Rutgers Hackathon, producing a prototype in 24 hours.
- Integrated GPT-4o, ElevenLabs, and Manim to generate narrated learning videos with a responsive Next.js frontend.
- Implemented error-handling pipelines that improved AI output reliability by 50%.

SnapChef – Ingredient Analyzer | *FastAPI, Python, React Native, Node.js, Expo* February 2025

- Led a team to earn 2nd place among 250+ participants at Rutgers Hackathon, delivering a polished MVP in 24 hours.
- Reduced food waste by helping users convert leftover ingredients into recipes through AI-powered visual recognition.
- Built a React Native mobile app with Expo and a FastAPI backend that processed ingredient photos via GPT-4 Vision, using a Node.js image scraper with the Pexels API to auto-populate 10,000+ recipe images.

Hearo – Transformer-Based Noise Cancellation | *Python, PyTorch, React Native, WebSockets* October 2025

- Developed a transformer-based audio intelligence platform that identifies 500+ sound classes with 92% classification accuracy, enabling users to selectively suppress chosen sounds in real time.
- Integrated real-time sound classification with a language-guided separation model for adaptive noise suppression, achieving 95% suppression accuracy and under 200ms response latency.
- Built a mobile React Native dashboard with WebSocket streaming for live control, cutting latency by 65%.

Schedule Sniper – Rutgers Course Notifier | *Python, Discord.py, AWS EC2* February 2024 – October 2024

- Built a Discord bot hosted on AWS EC2 monitoring 30K+ courses with 99.9% uptime, helping 400+ students secure seats.
- Processed Rutgers course data in Python, delivering real-time alerts with less than 300ms latency at 43K+ daily queries.
- Implemented a one-time premium tier offering extra course tracking, achieving a 10% user conversion rate.