JEEVA RAMASAMY

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EDUCATION

Georgia Institute of Technology Aug 2025 – May 2027
Master of Science in Computer Science (Machine Learning Specialization) *Atlanta, GA*
Coursework: Machine Learning, ML Theory, Computer Vision, Data & Visual Analytics

Rutgers University–New Brunswick | GPA: 4.0/4.0 Sep 2021 – May 2025
Bachelor of Science in Computer Science & Data Science (Honors) *New Brunswick, NJ*

EXPERIENCE

Visible Jun 2025 – Aug 2025
Software Engineer Intern *Los Angeles, CA*

- Engineered real-time chat system with React/Django/Ably, supporting 7,000+ active users with seamless messaging. Reduced backend load by 60% through event-driven architecture and asynchronous processing.
- Integrated MongoDB Atlas for message persistence, enabling high-throughput, low-latency reads/writes, by implementing optimized indexing strategies that improved query performance by 45%.
- Designed and integrated REST APIs with secure authentication, improving cross-service communication and maintainability.
- Conducted rigorous performance and stress testing, scaling system to 100,000 concurrent users and 8,000 messages/sec while maintaining <200ms latency and <1% failure rate.
- Collaborated with team to deploy CI/CD pipelines, cutting deployment time by 30% and improving release reliability.

Rutgers University–New Brunswick Sep 2024 – May 2025
Machine Learning Research Intern *New Brunswick, NJ*

- Improved short-term solar irradiance forecasting accuracy by 20%-39% for energy grids by engineering a scalable deep learning pipeline using CNNs on sky image sequences.
- Automated refugee settlement detection via Python ML pipelines using satellite imagery (Google Cloud), improving scalability over manual mapping and achieving 82% classification accuracy.
- Implemented data augmentation pipeline with OpenCV, enhancing model robustness against varied conditions.

New Jersey Economic Development Authority Jun 2023 – Apr 2024
NJ Wind Institute Research Fellow *New Brunswick, NJ*

- Performed exploratory data analysis and feature engineering on 100GB+ environmental datasets to identify North Atlantic Right Whale (NARW) presence patterns to support marine conservation and offshore wind planning.
- Trained and evaluated ensemble supervised learning models (Random Forest/AdaBoost) to predict whale presence, boosting recall from 16% to 56.5% and F1-score from 0.16 to 0.66.
- Co-authored high-impact publication in Nature Scientific Reports with 97th percentile reach and international press coverage.

PROJECTS

RU Super Scheduler | GitHub | *Python, JavaScript, REST APIs, React, Flask, MariaDB*

- Developed a full-stack scheduling and degree planning platform to simplify the fragmented course selection process at Rutgers.
- Devised modular backend architecture enabling scalable microservice additions (e.g., SPN tracker, audit tool).
- Built a context-aware AI assistant using Google Gemini API to suggest courses and track degree progress, reducing average course planning time by 40%.

Image Colorizer | GitHub | *Python, PyTorch, OpenCV*

- Designed a CNN for colorization of grayscale images in the CIELAB space, leveraging perceptual loss for realistic outputs.
- Curated and preprocessed 7,000+ landscape images from Kaggle, automating resizing, normalization, and augmentation.
- Achieved over 90% average per-pixel RGB similarity between generated and target images on unseen data.

SKILLS

Languages	Python, Java, TypeScript/JavaScript, C/C++, R, SQL, XML, HTML/CSS, Bash
Frameworks	React, Node.js, Express, Django, Flask, FastAPI, PyTorch, TensorFlow, Scikit-learn, Pandas, OpenCV
Tools	Git, Docker, Kubernetes, AWS, PostgreSQL, MongoDB, Firebase, Linux, REST APIs, CI/CD pipelines
Concepts	Data Structures & Algorithms, System Design, Cloud Computing, OOP, Unit Testing, Agile

ACHIEVEMENTS

Certifications: AWS Certified Developer – Associate (Expires Jan 2027)

Awards: Summa Cum Laude, Matthew Leydt Society (top 2% of Rutgers Graduates), Segal Foundation Scholarship, Dean's Excellence Award, Rutgers Data League Winner (1st place / 276 participants)

Publications: Nature Scientific Reports, 2024 – "Machine learning for modeling North Atlantic right whale presence..."