

Nivedhaa Naresh Kumar

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EDUCATION

Boston University

Expected May 2028

B.S. in Data Science

Relevant Coursework: Multivariable Calculus, Digital Logic & Computer Architecture, Physics: E&M, Intermediate Microeconomics, Data Structures & Algorithms (Rust), Statistics & Linear Algebra

WORK EXPERIENCE

AI Engineer Intern

June 2026 – Present

Tata Consultancy Services (TCS)

- Developed and deployed AI-driven solutions for enterprise workflows using Python and ML frameworks
- Built data pipelines + model prototypes supporting automation and analytics use cases across client systems
- Collaborated with cross-functional engineering teams to integrate AI services into production environments

AI/ML Intern

May 2025 – Oct 2025

Emory University School of Medicine – Madabhushi Lab, Atlanta, GA

- Designed CNN & Transformer models in PyTorch/TensorFlow for endometrial ultrasound classification, achieving 89% accuracy
- Built end-to-end imaging pipeline (preprocessing, segmentation, feature engineering, contrastive learning)
- Reduced training time 6x (3+ hrs → 30 min) via preprocessing and model optimization

Data Engineering Intern

May 2025 – Aug 2025

Georgia Tech – Structured Information Neuroengineering Lab, Atlanta, GA

- Developed full-stack React dashboard to collect, structure, and visualize behavioral experiment data
- Designed real-time data ingestion pipeline integrating hardware instrumentation into web-based system
- Enabled cognitive psychologists to conduct studies 4x faster (1 hr+ → 15 min) through streamlined experiment setup

Research Assistant

Jan 2025 – Dec 2025

University of Rochester – Photoacoustic & Ultrasonic Research Lab, Rochester, NY

- Queried and cleaned large-scale signal metadata using SQL for downstream statistical analysis
- Co-designed ultrasound probe for real-time fetal brain monitoring to detect birth asphyxia
- Generated visualizations from raw ultrasonic signals to support faster clinical interpretation

PERSONAL PROJECTS

Somnia — AI-Powered Roommate Matching Platform React Native, TypeScript, Supabase, Hono, Cloudflare Workers

- Built AI-powered roommate matching platform with lifestyle compatibility scoring and swipe-based discovery
- Deployed live waitlist system to track early user adoption and engagement

Network Intrusion Detection System

Python, Scikit-learn, UMAP

- Built machine learning pipeline to detect DDoS attacks in real network traffic using the CICIDS2017 dataset
- Trained Random Forest classifier achieving 99.99% accuracy for binary traffic classification

LEADERSHIP & COMMUNITY

Chemistry Teaching Assistant

Aug 2025 – Dec 2025

University of Rochester

- Led two weekly recitation sections for 30+ students, improving exam scores by 30%
- Graded 120+ exams per cycle and provided detailed performance feedback

TECHNICAL SKILLS

Languages: Python, SQL, Rust, JavaScript

Machine Learning: PyTorch, TensorFlow, Scikit-learn, CNNs, Transformers, Image Segmentation

Data Analytics & Tools: Pandas, NumPy, Spark, UMAP, Git, React, HTML/CSS, Cloud