

Keshav Goel

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EDUCATION

Northeastern University

Bachelor of Science in Data Science and Mathematics, GPA: 3.88/4.00

May 2027

Boston, MA

EXPERIENCE

Johnson & Johnson

Software Engineering Co-op

Jun 2025 - Present

Raritan, NJ

- Built Node.js microservices on Kubernetes, automating transcription of **2K+** daily Slack messages across **5** channels into Excel reports for **30** cancer researchers.
- Deployed DICOM viewer on AWS EC2 with S3 storage, managing **10K+** medical scans for **300** research teams with automated sharing, upload, and visualization.
- Architected LangChain Agent pipeline using fine-tuned GPT-4o to autonomously summarize **500+** biomarker research papers, reducing literature review time by **75% (2 hours to 30 minutes)** per paper.

Northeastern University

Data Science Research Assistant

Oct 2024 - Present

Boston, MA

- Engineered TensorFlow regression model analyzing **20K+** EPA H-2A violations to predict high-risk agricultural areas, improving enforcement efficiency by **35%** through targeted inspections.
- Developed Python ETL pipeline processing **500GB** EPA data across **15** sources, reducing ingestion errors by **40%** via automated Pandas schema validation.

Northeastern University

DS2000 Teaching Assistant

Sep 2024 - May 2025

Boston, MA

- Conducted **200+** debugging sessions for **120**-student data science course, resolving Pandas, NumPy, and Matplotlib issues with **95%** same-day resolution rate.
- Reduced grading time by **60% (10h to 4h)** through automated pytest suite validating **240+** submissions across 12 assignment types.

VDart Inc.

Machine Learning Intern

May 2024 - Aug 2024

Atlanta, GA

- Reduced screening time by **86% (7 min to 1 min)** per candidate by automating resume analysis and interview transcription for **200+** daily applications.
- Fine-tuned Ollama LLM on **20K** resumes via HuggingFace Transformers and built FastAPI pipeline with MongoDB and AWS S3 for scalable candidate processing.

PUBLICATIONS

Co-Author, et al. "Worker Protection Enforcement: Description, Variation, and Predictors of Regulatory Vigor" (In Prep)

PROJECTS

ForgetMeNot (HackRU Winner) | FastAPI, Snowflake, Gemini, Google Cloud, React, OpenCV

- Built AI-powered memory assistance platform for dementia patients using facial recognition and multimodal LLM narration, winning HackRU against 500+ participants.
- Implemented vector search pipeline for content clustering with real-time audio generation, processing patient photos and medical records for personalized care.

BreatheEasy (CSBase Hacks Winner) | Flutter, Dart, Google Maps API, Shelf, Docker

- Built Flutter mobile app optimizing navigation routes based on real-time air quality data, winning CSBase Hacks against 300+ participants.
- Designed Dockerized microservices backend computing optimal routes balancing air quality, distance, and travel time.

TECHNICAL SKILLS

Languages/Frameworks: Python (FastAPI, Flask), JavaScript/TypeScript (React, Node.js), Go, Java, C++, R, SQL
Databases/Cloud: MongoDB, MySQL, PostgreSQL, Snowflake, AWS (EC2, S3, Lambda), Docker, Kubernetes, Jenkins
ML/Data Science: PyTorch, Scikit-Learn, Pandas, NumPy, HuggingFace, Ollama, OpenCV, NLTK, Matplotlib
Concepts: Microservices, REST APIs, ETL, Machine Learning, Computer Vision, Distributed Systems, DevOps