Anisha Luthra

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WORK EXPERIENCE

Root Cause Finder, Co-Founder, New York, NY

Developing an AI platform to identify potential causes and personalized treatments for chronic disease patients.

- Built a biomedical RAG pipeline using Haystack, BM25, and OpenAI GPT-3.5-turbo, surfacing top-ranked root causes and treatments from peer-reviewed data in <10 seconds/query.
- Designed the system for modularity to later incorporate domain-specific retrievers (e.g., BioBERT) and semantic search via FAISS, improving contextual accuracy for nuanced diagnoses.
- Integrated clinician feedback from 20+ interviews into diagnostic ranking logic.

Pitara Co, Co-Founder, New York, NY

Launched a DTC brand for ethically sourced South Asian goods in April 2025 at pitaraco.com.

Built Shopify storefront, built partnerships with businesses in India, and managed B2B business development.

Memorial Sloan Kettering Cancer Center, Cancer Data Scientist, New York, NY Jul 2019 – Aug 2023 Pioneered ML/NLP efforts on the Clinical Data Mining team to extract metastatic sites from radiology reports.

- Co-first authored a Nature (Nov 2024) paper on ML/NLP for clinical outcome prediction.
- Trained BERT models to infer metastatic sites (AUC >0.9; precision/recall >0.8); identified 14% more metastatic sites per patient via NLP predictions than from billing codes.
- Uncovered novel metastatic-genomic trends in 20% of the 50 cancer types studied.
- Deployed models across 1M+ reports via cBioPortal; presented findings to leadership at AACR (American Association of Cancer Research) and MSK-MIND (Multimodal Integration of Data) Symposiums.

Analyzed clinical genomic datasets and discussed results with clinicians who used insights to inform patient care.

- Identified that radiation-associated rectal cancer patients have earlier stage tumors but higher rates of distant metastasis and lower survival compared to nonirradiated patients. (Published in JAMA March 2025)
- Discovered that African ancestry patients were younger, had later stage tumors, and had fewer clinically actionable alterations than European ancestry patients. (AACR abstract published Dec 2022)

NYC Data Science Academy, Data Science Fellow, New York, NY

- Built ML models for hospital readmission and housing prices, from data cleaning to stacking models.
- Web scraped 19K+ drug reviews on WebMD with Scrapy; visualized results in R Shiny.

Cornell University (Clark and Messer Labs), Research Assistant, Ithaca, NY	Jan 2017 – May 2018
Elephant Listening Project, Data Analyst, Ithaca, NY	Sept 2017 – May 2018
Analytical Graphics Inc., Software Development Intern, Exton, PA	Jun 2016 – Aug 2016
M.D. Anderson Cancer Center, Bioinformatics Trainee, Houston, TX	Jun 2013 – Jun 2014

LEADERSHIP

Epidemiology and Biostatistics Culture Committee, Co-Chair, New York, NY

Led DEI research discussions with 50+ people, including department head. Presented initiatives at departmentwide meetings. Spoke to underrepresented high school students about careers in computational biology.

HOPP Summer Student Program, High School Student Mentor, New York, NY

EDUCATION

Cornell University, B.S. Computational Biology, Ithaca, NY	May 2018
Alpha Phi Omega (service fraternity), Elephant Listening Project, Hindi Service and Language Immersi	on in India

CERTIFICATIONS AND SKILLS

- Certifications: Natural Language Processing & Machine Learning (DeepLearning.AI), Algorithms (Stanford)
- Languages/Tools: Python (pandas, NumPy, matplotlib, seaborn, sklearn), R (ggplot2, Shiny), SQL, Git
- . ML/NLP: Logistic Regression, Tree-Based Models, Transformer models, TensorFlow, LLMs, RAG

Aug 2023 – Present

Sept 2018 - Dec 2018

Jul 2020 – Aug 2022

Jun 2021 – Aug 2021

Aug 2024 – Present