Aakash Suresh

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EDUCATION

University of California-Berkeley <div align="right">Berkeley, CA</div>

Bachelor's of Science in Computer Science, Electrical Engineering, and Bioengineering — *August 2024 – May 2028*

Coursework: Computer Programming (A), Data Structures (A), Designing Systems (A), Circuits and Devices (A), Introduction to Bioengineering and Molecules (A), Multivariable Calculus (A), Discrete Math (A)

Involvements: Healthcare VC Team (Health Engine), UCSF ML Research, Voyager Consulting (Quant Analayst)

EXPERIENCE

Machine Learning Research Intern — May 2025 – Present

Memorial Sloan Kettering Cancer Center - Carrot-Zhang Lab — *New York, NY*

- Developing ancestry-aware cancer risk classifiers using LightGBM and SHAP for interpretability, increasing prediction accuracy across admixed populations by 32%. Developing this model as part of the QSURE Program.
- Engineering a germline-somatic interaction pipeline using Snakemake, Hail, and Apache Spark to process TCGA and GENIE datasets, reducing variant-to-phenotype mapping time by 40%.

Data Engineering Intern — March 2025 – Present

T-Mobile — *Bellevue, WA*

- Developed an intelligent data discovery pipeline integrating RAG and agentic workflows, improving table/column recommendations in Navigator by 30% and enhancing search accuracy for 3500 users.
- Deployed a REST API on Databricks' Unity Catalog, leveraging vectorized metadata search to enhance natural language query understanding, reducing search time by 25% while maintaining enterprise data security standards.

Contract Machine Learning Engineer — September 2024 – January 2025

Quest Diagnostics — *Secaucus, NJ*

- Built experiment logging infrastructure to track lab test volume, improving operational efficiency and increasing test specificity by 25% through bias reduction.
- Created a time-series classification model to predict lab test volume trends six months ahead, optimizing data aggregation flow by 30% for proactive resource planning.

Artificial Intelligence Engineer Intern — June 2022 – August 2023

National Science Foundation — *Miami, FL*

- Developed a 1D-CNN classification pipeline for breast cancer subtype prediction, correlating genetic markers with subtype probabilities, achieving 95% accuracy and reducing identification time from weeks to seconds.
- Published findings on classification pipelines for cancer subtype detection, showcasing a model that leveraged 1D-CNN architecture to expedite diagnostics.

PROJECTS

Hunger Hotspot Predictor | *Python, PyTorch, React, TensorFlow* — Spring 2022 – Present

- Developed machine learning algorithms using Python, Monte Carlo Analysis, and Random Forest to identify patterns of food insecurity in various counties, improving supply chain efficiency by 89%.
- Enabled Congress to anticipate periods of heightened need and improved resource allocation by creating a dashboard through backend development increasing the amount of food distributed by 40%.

Predicting Trends in Research Papers | *Python, Docker, Git* — November 2023 – May 2024

- Published a research paper investigating the increase in gastroenterology abstract publications and how the COVID-19 pandemic has influenced this trend.
- Utilized a machine learning program to scan, sort, and filter through the data and identify discrepancies.
- Worked with Stanford professors to utilize Docker to store our data for future use within various conferences.

SKILLS AND AWARDS

Languages: Python, R, Java, C, C#, Go, Scheme (Lisp), SQL, HTML/CSS, MATLAB, Linux
Frameworks: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI
Developer Tools: Git, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: Git, Express.js, MongoDB, Pandas, Matplotlib, OpenCV, Scikit-Learn, PyTorch, TensorFlow
Awards: Coca-Cola Scholar (150/103,000), Scripps Research Grant Awardee, NSF Reearch Grant Awardee, NIH Research Grant Awardee, Elks Scholar, Sodexo Stop Hunger Scholar (Hunger Predictor), JEI Publisher