

# Vedha Mahesh

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## EDUCATION

### Cornell University

*Master of Engineering in Computer Science*

*Bachelor of Science in Biometry and Statistics | Minor in Computer Science*

**GPA:** 3.79

**Relevant Courses:** OOP & Data Structures | Probability Models & Inferences | Introduction to Database Systems | Quantitative Genetics & Genomics | Data Mining & Machine Learning | Foundations of Robotics | Business Intelligence Systems

**Ithaca, NY**

*May 2025*

*December 2024*

## RELEVANT EXPERIENCE

### Cornell AI Innovation Lab

*AI Developer*

**Ithaca, NY**

*August 2024 – Present*

- Build AI-driven tools using **Python** to improve research support at Cornell making it easier for teams to find key information and make data-informed decisions
- Developed a faculty expertise search chatbot trained on **300+ CVs and abstracts**; implemented RAG pipelines with OpenAI, semantic search, and summarization to improve search accuracy by **30%**
- Currently developing a student enrollment compliance assistant to streamline regulatory processes and reduce administrative burden, integrating LLMs with institutional policy data
- Built and tested LLM-based tools within **Docker** containers to ensure consistent runtime environments and simplify deployment across internal teams
- Designed and deployed a Streamlit app with custom front-end components for internal use; integrated **AWS S3** for secure storage and model data processing

### Deloitte Consulting

*Business Technology Consulting Intern*

**New York, NY**

*June 2024 – August 2024*

- Facilitated live cross-functional workshops across **10+ client departments** to gather and document critical business requirements supporting a large-scale data modernization project for a specialty insurance firm
- Led the creation and ownership of a comprehensive Reporting Catalog tracking over **1200 reports** across all client departments, ensuring accurate mapping of data sources and improving reporting efficiency
- Conducted detailed analysis of business requirements and effectively communicated actionable insights to management, leading to a **20% increase** in operational efficiency

### Privacera

*Data Science Intern*

**Fremont, CA**

*June 2023 – August 2023*

- Developed a chatbot in **Python** with contextual memory, dynamic source citation, and version-specific information delivery capabilities reducing customer support resolution time by **85%**
- Trained neural network using company-specific data, leveraging over **600 knowledge-based articles and FAQs** to enhance customer support efficiency and user experience
- Designed the chatbot with fallback handling and prompt tuning to improve consistency, reduce hallucinations, and ensure reliable user responses across varied queries
- Presented working demo to senior leadership for chatbot implementation, highlighting key benefits and expected outcomes

## TECHNICAL PROJECTS

### GWAS Analysis | R (dplyr, ggplot)

- Conducted a Genome-Wide Association Study (GWAS) on gEUVADIS data, analyzed SNP genotypes and gene expression in **344 individuals** across European populations, visualized key genetic associations with Manhattan and QQ plots

### CLI Monopoly | OCaml, Git

- Developed a command-line version of Monopoly in **OCaml**, designed a hardcoded board and implemented core gameplay mechanics, included property purchases, auctions, player statistics, and special board actions

### CDC Smoking Data Analysis | R (dplyr, ggplot, shiny)

- Cleaned and analyzed **4,000+ rows** of CDC BRFSS data (2011–2019), built an interactive Shiny app with visualizations and regression models to identify key predictors of smoking behavior based on factors such as race, age, and education

## SKILLS AND INTERESTS

**Programming Languages:** Python, R Programming, SQL, Java, OCaml, Swift

**Tools and Frameworks:** Git, Docker, ROS, NumPY, Scikit, Pandas, PyTorch, Matplotlib, JIRA

**Clubs/Involvements:** Cornell Tech Consulting, Women in Computing at Cornell, Cornell Rock Climbing Club, Teaching Assistant