Sanjana Pendharkar

📞 732.991.2318 ✉ sanjanapendharkar01@gmail.com 🔗 linkedin.com/in/sanjanapendharkar 🔗 github.com/aroastedrepo

Education

Rutgers University, New Brunswick **August 2022**
Bachelor of Science (Honors) in Computer Science, Minors in Math and Biology *New Brunswick, NJ*

Experience

MITRE **McLean, VA**
Technical Research & Advisory Firm for 42 National FFRDCs and DoD
Intermediate Data Scientist *Dec. 2021 – Present*
- Refactored the codebase for *Septar*, a Dockerized Flask/SQL application hosted on AWS, designed to quantify AI trust and trustworthiness through a Likert survey, while enhancing testing and evaluation outcomes for DoD sponsor
- Developed a comprehensive 10-page presentation showcasing the features of *Septar* and delivered technical briefings to potential collaboration teams, effectively translating complex concepts for non-experts to foster partnerships
- Led the evaluation and testing of the Retrieval Augmented Generation (RAG) Pipeline for a DoD sponsor, leveraging Ragas and ARES methods to increase the accuracy of LLM outputs by 15%, enhancing the reliability of model evaluations
- Tools: Python, SQL, JavaScript, Docker, AWS

Lead Researcher, "The Third Eye" *Jan. 2023 – Dec. 2023*
- Secured $95,000 in grant funding for an iOS application designed to improve navigation for low-vision individuals in train stations
- Developed and prototyped an iOS application, with 98% object detection accuracy for computer vision model, and laid the groundwork for beta testing with mentors
- Fine-tuned a Hugging Face Transformers object detection model for particular use case, and developed a confusion matrix that increased model performance visibility by 25%
- Advanced the accessibility research space with 2 manuscript submissions for academic journals, supported by a comprehensive literature review of 55+ journal papers
- Tools: Swift, PyTorch, Hugging Face

Loyal For Dogs **San Francisco, CA**
Series A Biotech; First FDA Approved Drug for Dog Longevity
Software Engineer Intern *Aug. 2021 – Dec. 2021*
- Enhanced user experience and operational efficiency by contributing to the development of a production website using TypeScript, React, and GraphQL, achieving a 15% improvement in runtime, and supporting the company's goal of delivering a high-performance, interactive website to 1,000+ dog owners
- Pioneered an innovative independent experiment using computer vision algorithms (ResNet, AlexNet, VGG16) and data science techniques (PCA, Bayesian statistics) to detect emotions in dogs, expanding potential market applications
- Tools: Python, TypeScript, React, GraphQL

Technical Skills

Languages: Python, Postgres, Next.js, Swift, JavaScript, TypeScript, HTML/CSS, Java, C
Technologies/Frameworks: Spark, PyTorch, TensorFlow, Hugging Face, React, Jekyll, Git, Figma, GraphQL, MongoDB

Leadership

MITRE: Technical Book Club **McLean, VA**
Lead Organizer *May 2023 – Aug. 2023*
- Addressed an unmet need of technical understanding of complex database systems in department by creating a deck for and leading collaborative discussions on the "Designing Data-Intensive Applications" O'Reilly textbook
- Efforts led to improved team competency and a more collaborative learning environment in the department, and cultivated team expertise in database management

Catalysts For Change **New Brunswick, NJ**
Founder *March 2021 – Oct. 2022*
- Description: A summer social justice fellowship for high school students to build technical projects or research studies for funding opportunities
- Led go-to market strategy and primary research on market segments, quantifying market opportunity, resulting in customer acquisition rate of 65%
- Developed a software development project curriculum for technical instructors to adapt in the creation of their course structure, outlining object oriented programming, Twitter API integration and database management; enabled the successful launch of 15 new courses within one month
- Formulated sales pipeline to generate ∼$5,000 revenue for first cycle