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Sanjana Pendharkar

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Objective

Ambitious, driven data scientist avidly seeking a challenging Applied AI, Data Science or Product Engineer role that provides high agency and high impact work. Open to relocating anywhere in the US.

Work Experience

MITRE – R&D Nonprofit Organization that operates 6 FFRDCs

Intermediate Data Scientist   **Dec. 2021 – Apr. 2025**

- Led the evaluation of a Retrieval Augmented Generation (RAG) Pipeline which served as a decision aid for US DoD warfighters, improving LLM output accuracy by 15% through the application of Ragas and ARES methodologies.
- Engineered a scalable codebase for Septar, a Likert survey app measuring AI trust and trustworthiness metrics, using a containerized Flask/PostgreSQL architecture, RESTful APIs, CI/CD pipelines, and AWS infrastructure.
- Curated a presentation that highlighted the functionalities of *Septar* and delivered 5 technical briefings to potential collaboration teams, fostering 2 strategic partnerships for additional funding.
- Tools: Python, SQL, JavaScript, Docker, AWS

Lead Researcher, "The Third Eye"   **Jan. 2023 – Dec. 2023**

- Secured $95,000 in competitive grant funding through MITRE's prestigious Early Career Research Program (15% acceptance rate) by proposing an innovative iOS application that demonstrated a significant potential improvement in navigation efficiency for low-vision individuals in train stations.
- Engineered an iOS application by implementing real-time AI object detection with customized haptic feedback, utilizing Swift UI, Core ML, and ARKit within an Agile framework.
- Boosted object recognition accuracy to 98% by fine-tuning a Hugging Face Transformers model, creating a custom confusion matrix visualization tool that increased model explainability.
- Advanced the accessibility research space with 2 manuscript submissions for academic journals, supported by a comprehensive literature review of 55+ journal papers and 20+ private sector companies.
- Tools: Swift, PyTorch, Hugging Face

Loyal For Dogs – 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 direct deployment to 1,000+ dog owners.
- Pioneered an innovative independent experiment using computer vision algorithms (ResNet, AlexNet) and data science techniques (PCA) to detect emotions using dog faces, expanding potential market applications.
- Tools: Python, TypeScript, React, GraphQL

Education

Rutgers University, New Brunswick   **Sept. 2017 – Aug. 2022**

B.Sc. Computer Science (Honors); Minors in Math & Biology   *GPA: 3.7/4.0*

Awards: Innovation Award, NSF CSGrad4US Fellowship (Full funding for 3 years of graduate studies in Computer Science)

Technical Skills

- Languages: Python, SQL, Swift, Next.js, JavaScript, TypeScript, HTML/CSS, Java, C
- Technologies: PyTorch, TensorFlow, Hugging Face, React, Git, GraphQL, MongoDB