Jinendra Malekar

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Education

University of South Carolina College of Engineering and Computing — Columbia, SC

Master of Science: Computer Science — Expected May 2025

Major GPA: 3.75/4.0

Relevant Coursework: Analysis of Algorithmic, Edge and Neuromorphic Computing, Advanced Topics in Neuro-symbolic AI, Compiler Construction, Network Systems Security

Technical Skills

Languages/Frameworks: Java, JavaScript, C++, Python, HTML, CSS, React.js, Next.js, React Native, Bash, Node.js, Flask, Express.js
Others: MongoDB, AWS, SQL, Git, Nginx, Firebase, Postman, Bootstrap, RESTful API, FAST API

Professional Experience

Artificial Intelligence Institute at University of South Carolina — Columbia, SC

Graduate Research Assistant (Research Advisor: Dr. Amit Sheth) — August 2023 - Present

- Designed and implemented a comprehensive full-stack application to create and merge diverse knowledge graphs, facilitating the integration of various knowledge bases on the internet and supporting knowledge discovery
- Created a web-based real-time application for monitoring and annotating high-risk suicidality-related posts on Reddit, achieving a remarkable **90%** reduction in evaluation time and an accuracy rate exceeding **85%** for annotating posts
- Invested over **450+** hours in conducting research on Language Models and mental health, leading to the development and execution of functional research projects resulted in the submission of **2** papers currently under review at prestigious AI conferences

Research Specialist — July 2022 – August 2022

- Developed a mobile app for **Prisma Health**, enhancing monitoring for **15** type-1 diabetic patients and with an intuitive interface, achieving a **20%** increase in patient engagement for daily carbohydrate tracking of patients for insulin management
- Collaborated on a customized dashboard with **BMW** Greenville/Fraunhofer material planners, improving data accessibility and efficiency by **25%**, migrated the backend database from MongoDB to Redis achieving a **30%** performance boost
- Focused on disaster management, built an interactive dashboard that improved shelter and medical assistance access during calamities utilizing real-time Twitter data, achieving a notable **40%** boost in disaster response efficiency
- Devoted **900+** hours researching Language Models integration with mental health, working on impactful research projects resulted publication of two papers in prestigious AI conferences

Software Developer — Delhi, India

Krya Innovations Pvt. Ltd — July 2021 – June 2022

- Oversaw consumer-facing components of the 'rippl' web app on the Next.js framework, delivering new features and enhancing capabilities, resulting in a **20%** increase in user engagement
- Collaborated with the design team to create a comprehensive front-end website using React.js, contributing to a **15%** expansion in the product's reach and usability, fostering increased user engagement and satisfaction

Projects

Suicidality Diagnosis of Online Reddit Data| Demo — Pytorch | Flask | Reactjs

- Built a web application using advanced natural language processing having accuracy of **85%** to track suicidal posts on Reddit
- Improved algorithm efficiency by **50%**, improving the prediction of suicidality-related concepts in text, and reduced system latency to an impressive 0.8 seconds per sentence for real-time monitoring

Prisma Health Mdiabates App| Demo — React native | MongoDb | Node.js | Flask

- Developed a thorough mobile application for **Prisma Health** to assist in monitoring individuals with type-1 diabetes
- Designed an intuitive interface enabling patients to effectively manage insulin levels by tracking daily carbohydrate intake, highlighting expertise in healthcare data management and patient support solutions

BMW Dashboard for Greenville/Fraunhofer| Demo — AWS | React.js | MongoDB | Fast API

- Worked with BMW Greenville/Fraunhofer material planners to create a tailored dashboard, achieving a **30%** productivity boost
- Led the development of the dashboard's React.js front end and coded a robust Python-based backend for enhanced performance and **25%** efficiency during the project's initial phase

Disaster Record| Demo — Python | React | Flask | Tensorflow

- Emphasized disaster management by creating an interactive dashboard for crucial information during natural calamities
- Created a tool for shelter location and medical aid during disasters, achieving a **40%** improvement in response efficiency

Publications

- Kaushik Roy, Yuxin Zi, Manas Gaur, Jinendra Malekar, Qi Zhang, Vignesh Narayanan, Amit Sheth, "Process Knowledge-infused Learning for Clinician-friendly Explanations" June 2023. AAAI Second Symposium on Human Partnership with Medical Artificial Intelligence **[paper]**
- K. Roy, V. Khandelwal, R. Goswami, N. Dolbir, J. Malekar, and A. Sheth, "Demo Alleviate: Demonstrating Artificial Intelligence Enabled Virtual Assistance for Telehealth: The Mental Health Case" Oct 2022, Accessed on 12/09/2022. [Online] Proceedings of the AAAI Conference on Artificial Intelligence **[paper] [demo]**