

Sri Manvith Vaddeboyina

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EDUCATION

University of Southern California, CA	Master of Science in Computer Science	Aug 2022 - May 2024
Jawaharlal Nehru Tech. Univ., India	Bachelor of Science in Computer Science	Jul 2017 - Jul 2021

TECHNICAL SKILLS

Languages: Python, R, C, C++, Java, JavaScript, TypeScript, SQL
Web Technologies: HTML/CSS, Bootstrap, Angular, React, Node.js, Flask, Django, Spring Boot, Shiny
Databases: Oracle DB, MySQL, MongoDB, PostgreSQL, Stardog
Others: SciPy, NumPy, MATLAB, GLPK, pandas, matplotlib, TensorFlow, PyTorch, spaCy, Hadoop, Spark, Tableau, Git, Jira, Docker, SwiftUI, Linear Programming, Nonlinear optimization.
AWS Services: EC2, Lambda, S3, OpenSearch, Step Functions, SageMaker, BedRock, EMR

EXPERIENCE

USC Alzheimer's Therapeutic Research Institute	Jun 2023 - Present
<i>Software Developer</i>	<i>San Diego, CA</i>

- Developed reusable RESTful APIs for multi-functional web applications and improved Electronic Data Capture system components, enhancing API performance by 60%.
- Developed clinical report scripts with quality checks, cutting generation time by 50%, automating checks, and designing dashboards for data-driven decisions.
- Devised a pipeline for efficient data processing, analysis, and report generation, maintaining confidentiality and adherence to SOPs for improved security and compliance.
- Tech Stack:** React, Django, PostgreSQL, TypeScript, Python, R, AWS S3, EC2, Docker, Cypress

Tata Consultancy Services	Mar 2021 - Jul 2022
<i>Software Engineer</i>	<i>Hyderabad, India</i>

- Developed various modules for scalable web application based on Elasticsearch, using Angular, Django, and MongoDB.
- Developed and tested custom spaCy Named Entity Recognition (NER) and Natural-Language Understanding (NLU) models on the domain-specific data, achieved 90% validation accuracy.
- Created triples for knowledge graphs using Relation Extraction (RE), obtained 80% match in question-answering task.
- Leveraged AWS EC2 for data processing and S3 for storage, optimizing infrastructure for NER, NLU, and RE tasks.
- Tech Stack:** Angular, Django, MongoDB, AWS, Python, Elasticsearch, Stardog, spaCy, BERT, Postman

Indian Institute of Technology	May 2020 - Jan 2021
<i>Software Engineer</i>	<i>Hyderabad, India</i>

- Led research on intrusion datasets, evaluated ML models for intrusion classification, and achieved 86% validation score.
- Created a Django-based static website to show performance results of evaluated ML models for intrusion classification.
- Tech Stack:** Django, AWS EC2, pandas, scikit-learn, NumPy, matplotlib, seaborn, Beautiful Soup

PROJECTS

Text summarization for improved technician productivity | Cohere FM, AWS Bedrock, AWS Lambda, AWS Gateway

- Implemented a robust text summarization system to provide concise summaries for faster technician issue resolution. Enabled technicians to access key insights from reports, facilitating quicker decision-making.

EventExplorer: an event search application | Angular, Node.js, Swift, Ticketmaster API, Axios

- Developed a dynamic events search web app and an iOS app using the Ticketmaster API. Enhanced user experience by implementing a favorites feature, allowing users to save and track events and deployed on GCP for robust performance

Identification of Frost in Martian HiRISE Images | Python, pandas, scikit-learn, EfficientNetB0, ResNet50, VGG16

- Worked on classifying Martian terrain images into 'background' and 'frost' classes using various models using advanced data augmentation techniques and leveraged transfer learning using pre-trained models to enhance classification accuracy.

Biomedical Relation Extraction for Gene-Disease Associations | Python, pandas, NumPy, NLTK, spaCy, GloVe

- Led a biomedical text mining project, automating gene-disease association extraction with NLP. Built a pipelined architecture on TBGA dataset, achieving a 79% F1-Score on validation, advancing precision medicine and drug discovery.

RESEARCH PAPERS

- A Performance Comparison of Machine Learning Approaches on Intrusion Detection Dataset** [Link](#)
- NetMD-Network Traffic Analysis and Malware Detection** [Link](#)
- GATEZEE-An Automated Gate Pass Management System** [Link](#)