MANASA SAI KARANAM

+1689-275-6137 ◇ Oviedo, FL ◇ manasakaranam6199@gmail.com ◇ LinkedIn ◇ GitHub

EDUCATION

Master of Science : Computer Science, University of Central Florida ***May 2025 ; GPA 4/4***
Relevant coursework: Design and Analysis of Algorithms, Advanced Data Structures, Machine Learning, Distributed Systems & Cloud Computing and Computer Vision.

Bachelor of Technology : Computer Engineering, Indian Institute of Information Technology SriCity ***2016 - 2020 ; GPA 8.32/10***

SKILLS

Golang, Python, C, Java, MySQL, MongoDB, Aerospike, DynamoDB, PySpark, HDFS, Kafka, Snowflake, Beego API, Gin, Django, Flask, FastAPI, AWS (EC2, S3, Lambda, RDS, CodePipeline, DynamoDB, CloudWatch, SNS), RabbitMQ, HTML, CSS, JavaScript, React.js, Git, Docker, Kubernetes, Blockchain , Linux, Unit-Testing, Tableau.

PROFESSIONAL EXPERIENCE

Software Development Engineer ***September 2021 - December 2023***
Tanla Platforms Ltd. Hyderabad, India

- Engineered a blockchain-powered telecom system (TruBloq) processing 1M+ daily transactions using Hyperledger Fabric, RabbitMQ, Aerospike, and Redis Cache, ensuring scalable, and real-time message authentication.
- Refactored and migrated 150+ legacy applications from Python to GoLang, using goroutines, channels, and worker pools for concurrency, reducing cloud costs by 30%, and increasing system throughput by 50%.
- Orchestrated and deployed the Smart Contract for Preferences with 100% accuracy, securely storing and managing commercial communication preferences for over 1 million users, ensuring compliance with TRAI regulations and preventing unsolicited messaging, reducing legal risks by 30%.
- Built high-performance RESTful and gRPC APIs using Gin and FastAPI, integrating MySQL, MongoDB, and Redis to handle 1,00,000+ API calls daily with low latency, efficient data retrieval, and seamless scalability.
- Automated report generation for user preferences using AWS S3 and Parquet, ensuring 99.9% data precision, while reducing repetitive manual deployment efforts by 80% through the implementation of Kubernetes and Docker-based CI/CD pipelines, streamlining both reporting and deployment processes.
- Collaborated closely with the Wisely-AI team to design and implement developer pipelines and APIs, reducing model integration and deployment time by 40% and enhancing data processing efficiency by 30%.
- Delivered a portal to automate the manual port-out process for the support team, reducing processing time by 50% and improving operational efficiency by streamlining workflows, handling over 1,000 port-out requests daily.

Software Engineer - Data Platforms ***July 2020 - September 2021***
Larsen and Toubro Infotech Mumbai, India

- Optimized ETL workflows for COVID-19 analytics (Spark and Snowflake), reducing data processing time by 40% and improving fault tolerance, resource efficiency, and integrating SMPP/SMTP for data pipeline notifications.
- Designed AWS-based data pipelines using S3, Glue, Redshift and Lambda, reducing storage costs by 30% and allowing age-wise population analysis. Visualized insights in Tableau for data-driven policy decisions.

PROJECTS

AI-Powered Job Matching Platform (Hackathon – ALPFA, Morgan Stanley "Code to Give" , Alpharetta 2024):

- Spearheaded the development of an AI-driven job recommendation system using React.js, Cohere's LLM, FastAPI, and PostgreSQL, automating resume/job parsing and intelligent matching for over 5,000 job seekers, improving candidate-job fit accuracy by 35%.
- Implemented real-time notifications, filtering, and job-event ranking with RabbitMQ, Amazon SNS, and match scores, streamlining recruiter-candidate interactions and processing 1,000+ job applications daily, enhancing engagement and reducing time-to-hire by 25%.

Historical Video Quality Restoration using Deep Learning Models , Competition – UCF AI/ML Hackathon 2024:

- Pioneered a video restoration solution using DeOldify and ESRGAN, enhancing 500+ hours of historical content, improving color accuracy by 60% and boosting image resolution to 4K..
- Crafted the pipeline for colourization followed by upscaling, slashing manual effort and processing time by 70%, while delivering high-definition, visually enriched archival content, elevating the user experience with enhanced resolution and vivid color accuracy

ZJS – Smart Water Advisory Framework (Research Paper Published at – IEEE ACIT 2020 Germany):

- Structured a satellite-driven pipeline optimization system using Django, MySQL, and OpenCV, enabling intelligent interconnection of water sources, reducing pipeline distances by 36%, and cutting infrastructure costs, while improving water resource distribution efficiency by 40% and reducing environmental impact by 20%.
- Published at the IEEE ACIT 2020 Conference in Germany, showcasing the practical applications of AI-powered pipeline optimization for sustainable water management, demonstrating a significant reduction in infrastructure costs and enhancing resource distribution efficiency.

LICENSES & CERTIFICATIONS

- **Docker Foundations Professional Certificate** – Mar 2025
- **Build REST APIs with FastAPI** – LinkedIn Learning (Mar 2025)
- **Generative AI: Introduction to Large Language Models** – LinkedIn Learning (Mar 2025)