SUHAS KUNTE MANJUNATH RAO

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Education

University at Buffalo · **August 2025 - May 2027 (Expected)**
Master of Science in Computer Science and Engineering · *GPA: 3.83/4*

New Horizon College of Engineering, Bengaluru · **June 2019 - June 2023**
Bachelor of Engineering in Information Science and Engineering · *CGPA: 9.36/10*

Experience

University at Buffalo · **September 2025 – Present**
Research Assistant · *Buffalo, NY*

- Evaluating **LLaMA 3.1 LLM performance** to analyze code-generation quality and compliance with **Secure Coding Practices (SCP)** for internal benchmarking studies.

Brillio · **March 2024 – July 2025**
Associate Engineer · *Bengaluru, India*

- **Achieved 70% code conversion accuracy** by developing API-based agents for legacy TIBCO BusinessWorks repositories to .NET microservices, leveraging **Retrieval-Augmented Generation (RAG)** for context-aware and automated code transformation, reducing manual rewriting effort by **60%**.
- Customized an internal developer portal using the open-source **Backstage platform**, creating reusable templates for automated deployments on **Amazon EKS** and **EC2**, reducing deployment setup time from **40 minutes to 15 minutes** and improving developer onboarding efficiency by **70%**.
- Built an **SQL-based chatbot** over the **ServiceNow Incident database (100K records)** using **Claude model via AWS Bedrock**, enabling real-time query responses and eliminating the need for manual SQL queries, significantly improving user productivity.
- Implemented two **cloud migration strategies**—refactoring applications for **AWS Elastic Beanstalk** and rehosting to **Amazon EC2**—automating deployment pipelines with GitHub Actions to eliminate manual scripting and reduce overall deployment effort.
- Enhanced API security for app modernization project by integrating **CryptoJS-based encryption and decryption** for every API request and response, securing **100% of endpoints** and eliminating vulnerabilities in data transmission.

Hindustan Aeronautics Limited · **March 2023 – April 2023**
Project Internship · *Bengaluru, India*

- Developed the Sensor Data Management (SDM) system in Visual C++, enabling seamless data exchange between the main computer and UAV, **reducing packet loss by 15%**.
- Designed an interactive GUI in **Microsoft Foundation Class (MFC)** for real-time visualization and control of sensor data, improving monitoring efficiency and system usability.

Technical Skills

Languages/Frameworks: Java, Python, C, JavaScript, React.js, React Native, Flask, Express.js
Databases/Tools: Oracle SQL, MySQL, AWS (EC2, EKS, Elastic Beanstalk, AWS Bedrock), GitHub, Google Firebase, RAG

Projects

KnowHive 🔗 - Built a knowledge-based platform with React.js and Flask, created REST APIs to integrate a GPT-2 model for recommending solutions, and used MySQL to store chat history and user details, **reducing incident resolution time by 25%** .

Conventia 🔗 - Developed a React native mobile application integrating **FaceNet** for facial recognition and **Pyannote** for speaker diarization, achieving **85% speaker identification accuracy** to help Alzheimer's patients recall and track conversations effortlessly.

Visual Assistant System - Designed and implemented a real-time visual aid using **YOLOv3** to detect and classify objects in live video feeds, achieving **92% detection accuracy** and enhancing obstacle awareness for visually impaired users.

Achievements

Toycathon (National Level Hackathon) 🔗 | *Winner*

- Programmed a digital board game using Python that provides knowledge about Indian culture, with participation from over **1.2 lakh participants** across India and shortlisted as one of the top **117 winners** in the digital edition of the Toycathon, a national-level hackathon.