

# TEJAS A

Software Development Lead | AI and ML engineer | Stake Holder Management | Problem Solving

+918431703553  Bangalore India  tejas2207@yahoo.com  
[Coursera](#) [Medium](#) [LinkedIn](#) [GitHub](#)

## CARRIER OBJECTIVE

Driven technologist transitioning from traditional software development to modern agentic AI systems. Currently leading engineering efforts at a healthcare startup, with a strong focus on advanced automation, multi-agent workflows, and AI-powered problem-solving. Eager to contribute deeply to the emerging agentic era by building intelligent solutions that simplify complex operations, enhance user experience, and significantly reduce business effort and time through scalable, automation-first architectures.

## SKILLS

- Programming:** Python, Node.js, SQL, Flutter
- Frameworks & Libraries:** Flask, Pandas, MLflow, OpenCV, NeuroKit, Scikit-Learn, Streamlit, Plotly, LangChain, LangGraph, LangSmith/OpiK, AutoGen, ADK, RAG (Vector DB), MCP, LLMOps, Prompt Engineering, OpenAI API
- DevOps / CI-CD:** Google Cloud Platform (GCP), Firebase, Docker
- Domain & Professional Skills:** Stakeholder Management, Team Leadership, Product Research & Development, Project Coordination, Electronic Health Records (EHR/EMR), CPT Codes, RxNorm, ICD Codes, HIPAA Compliance

## RECENT ADVANCEMENT

- Pursuing advanced coursework in **Agentic AI and Generative AI**, focusing on **LLM-driven system design, memory management, and stateful AI architectures for production-grade applications**.
- Developed AI-based projects including a **Nutrition & Diet Planner** and an **ATS Resume Scoring System**, applying **LangChain, prompt engineering, and retrieval-augmented generation (RAG) principles**.
- Hands-on understanding of **state management, memory, and session persistence in agentic workflows** to enable continuous, context-aware reasoning in applications.
- Experienced in leveraging **modern AI assistants** and copilots (**Gemini, ChatGPT, Copilot**) to enhance development efficiency, automate workflows, and integrate generative capabilities into software products.

## PROFESSIONAL EXPERIENCE

### Software Development Lead -Saigeware

April 2024 - Present

- Complete Ownership of a **clinical research study managing stakeholder communication and reporting**, coordinating with data collection and QA teams, **performing statistical analysis, executing feature engineering, and developing predictive models**.
- Product **Vitalogy** – an audiology-focused platform for U.S. audiologists that stratifies patient hearing risk and provides deeper insights to support more accurate assessments and improved patient care.
  - Responsible for **overseeing and developing the Flutter iOS application** based on stakeholder requirements, while actively contributing to the app's overall development.
  - Responsible for building an **agentic system using LangChain and prompt engineering** that interprets patient input, generates concise summaries, and identifies the appropriate patient category.
- Product **Vitalogy Conversational App**, A conversation-driven data collection platform built using **advanced prompting techniques** and a **LangGraph-based multi-agent system**, featuring robust **validation, session and state management, and memory handling**.
- Product **SAiWELL** – Led the development of a SaaS platform for patients, providers, and clinics. Acted as the main link between stakeholders and engineers, translating requirements into technical specs and managing the delivery timeline.
  - Backend Development:** Built backend services using **Flask and Firebase, integrated health data from Google Fit, Apple Health, and smart rings, payment gateway Stripe**. and deployed **Docker-based microservices on Google Cloud**.
  - Mobile & Hardware Integration:** Directed iOS and Android app development with seamless **smart ring connectivity and integration with Apple HealthKit and Google Health**.
  - Feature Delivery:** Developed key modules such as **booking, ordering, and notification management for patients, providers, and clinics**.
  - Testing & QA:** Supported QA in creating and executing manual and automated tests using Python Selenium and Dockerizing the testing process for Dev ops
  - API Integrations:** Contributed to **integrating third-party APIs**, including **weather services, device manufacturers, and EMR systems**.

### AI Software Engineer-Saigeware

August 2022-April 2024

#### Machine Learning-Based Prediction of Readmission Risk – Research Paper

Developed and deployed **end-to-end ML models** to predict **hospital readmission risk using EMR data** in collaboration with Mayo Clinic. Built **ETL pipelines (Pandas, BigQuery SQL)**, performed ANOVA and PCA, and **designed one-to-one and one-to-many classification strategies**. Gained strong understanding of **CPT codes, RxNorm, facts, and flowsheet concepts**. Trained optimized **XGBoost models** and deployed them via **GCP containerized endpoints** with a **Streamlit** interface for evaluation. Published results in a peer-reviewed journal, advancing healthcare AI research.

#### Analysis of Phenotypic Markers

Conducted advanced research on phenotypic markers and biomedical signals using **TensorFlow and XGBoost** to model complex biological patterns. Processed **multimodal datasets (PPG, ECG, images)** with **Pandas, NeuroKit, opencv, dlib and NumPy** to build reliable **data pipelines**. Developed **end-to-end ML workflows incorporating ANOVA, Chi-square tests, PCA, MLflow-based experiment tracking on GCP**. Deployed models as **scalable Dockerized API endpoints on Google Cloud**, enabling real-time inference and smooth system integration.

#### Blood Pressure Estimation from PPG Signals

Developed and deployed regression models to estimate **blood pressure from PPG signals**. Engineered **key features from raw PPG data using NeuroKit** to enhance model accuracy and generalization. Built **a custom classifier to validate PPG wave cycles** and applied **statistical tests such as ANOVA** for feature importance analysis. Designed robust preprocessing pipelines to manage noise and signal variability. Achieved **low RMS and RMSE scores through experimentation with multiple regression techniques**.

## **Internships**

---

### **GCP Data Engineering Intern – Cognizant April 2022 – July 2022**

- Worked on real-time data platforms using **GCP and DataBricks**.
- Built **dashboards using Plotly Dash** and managed data workflows using **SQL and Python**

### **AI Intern – REMOCARE May 2021 – Nov 2021**

- Focused on **ECG signal processing, HRV feature extraction, and noise removal techniques.**
  - Developed **REST APIs using Google Cloud Functions.**
  - Skills: Biomedical Signals, GCP, Python, HRV Analysis
- Computer Vision Intern – Aquem Dec 2021 – Jan 2022**
- Contributed to a virtual try-on system for online shopping platforms.
  - **Deployed a live demo on a cloud VM instance.**
  - Skills: **OpenCV, Python, Cloud Deployment**

## **Projects**

---

### **Glucose Estimation Using PPG (Best Project Award)**

- Developed a non-invasive Machine learning glucose monitoring system using **PPG signals** and **NIR wavelengths**, deployed on **Raspberry Pi**.
- **Conducted signal processing, feature extraction, and built a regression model to predict glucose levels.**
- Skills: **Python, Biomedical Signal Processing, Raspberry Pi, Computer Vision, Deployment**

### **COVID-19 Chest CT-Scan Classification**

- Built a classification model to **distinguish between COVID and non-COVID cases using chest CT scans.**
- Published in **Emitter Journal** – [Read Article](#)
- Skills: **Machine Learning, OpenCV, Feature Selection & Extraction**

## **Education**

---

### **EDUCATION**

JSS ACADEMY OF TECHNICAL EDUCATION,BANGALORE BE in ELECTRONICS AND COMMUNICATION

2018-2022