

Sageena Garg

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INTRODUCTION

Passionate developer skilled in Java, Python, and full-stack web and app development, with a strong foundation in mathematics. Experienced in leveraging machine learning for data analysis and problem-solving while also having good interpersonal skills gained through working in teams in different projects and internships.

EDUCATION

Iowa State University, BS in Computer Science

Aug 2023 - Dec 2026

- GPA: 3.82/4.0
- Ranked Top 2% in class of 2027
- **Dean's List:** Fall'24, Spring'24, Fall'23
- **Coursework:** Design and Analysis of Algorithms, Software Development Practices, Construction of User Interfaces

EXPERIENCE

Fast Trac Intern, Iowa State University Research Park – Ames, IA

Feb 2024 - Present

- Enhancing answer retrieval from domain-specific documents using Retrieval-Augmented Generation (RAG) with Large Language Models (LLMs) for more efficient and accurate document querying.
- Utilize Power BI and Tableau to design interactive dashboards and visualizations that help communicate trends, patterns, and key findings to stakeholders.
- Apply machine learning techniques, including polynomial regression and R^2 evaluation, to model real-world data, extract actionable insights, and predict trends with high accuracy.
- Develop real-time yellow light detection using OpenCV and HSV color thresholding to identify yellow pixels in video frames.

Student Office Assistant, ISSO, Iowa State University – Ames, IA

Jan 2025 - Present

- Provide accurate, organized, and confidential administrative support, enhancing database integrity and system performance.
- Communicate effectively with individuals from diverse cultural, social, linguistic, and national backgrounds.

Teaching Assistant, Iowa State University – Ames, IA

Dec 2023 - May'24

- Led coding help sessions for COMS 1040 (Introduction to Programming - Python) and COMS 1130 (Spreadsheets and Databases), mentoring students in Python programming, database design, and problem-solving.
- Provided constructive feedback on coding assignments and database projects, improving student understanding of programming logic, debugging, and software design principles.
- In COMS 1130 course, guided students in effectively using Microsoft Office tools—Access for relational databases, Excel for data analysis, and Word for documentation—enhancing their proficiency in the full Microsoft Suite.

PROJECTS

TravelMate - Android Application

Jan 2025

- Designing a travel management app for group coordination with features like location sharing, expense tracking, and document management. Enabled real-time chat, notifications, and easy sign-in using Firebase. Integrated Google Maps API for geofencing and location tracking.
- Tools Used: Android Studio, Spring Boot, MySQL, Google Maps API, Firebase

SignalVerse - Web application

Feb 2024

- This project is a RAG (Retrieval-Augmented Generation) based Large Language Model (LLM) designed to answer user queries using domain-specific datasets. It leverages vector embeddings of PDF documents to provide accurate and contextual responses while storing user interactions and ratings in a MySQL database.
- Tools Used: Python, Flask, OpenAI GPT-4, LangChain, Chroma, MySQL, HTML, CSS.

Yellow Light Detection

May 2024

- Analyze traffic videos by processing CSV files with vehicle data (time, distance, speed), models vehicle trajectories using polynomial equations, and generates visualizations comparing actual and predicted data. It also marks yellow and red light phases and consolidates the results into an Excel file, detailing each vehicle's movement and decisions at the intersection.
- Tools Used: OpenCV, YOLOv8, NumPy, Pandas, Matplotlib, Scikit-learn, OS Module, Excel (via Pandas).

Element Quest

April 2024

- It is a 2D interactive game where various types of elements, including players, enemies, and platforms, interact within a dynamic game space. By leveraging key Java concepts such as inheritance, polymorphism, and encapsulation, the project was designed to allow smooth interaction between these elements. The use of abstract classes minimized code duplication and enhanced modularity, ensuring better code maintainability and scalability.
- Tools Used: Java, JavaFX, JUnit

TECHNOLOGIES

Languages: Java, Python, HTML, CSS, Bootstrap

Technologies: : Android Studio, SpringBoot, Firebase, MySQL, AWS, Flask, GitHub, Gitlab, Canva, Adobe Spark, Adobe Illustrator, MS Access

ACCOLADES

- Ivy Data Visualization and Storytelling Case Competition, Feb 2025 – 1st Place
- ISU JPEC Startup Pitch-Off Competition, Feb 2025 – 1st Place
- MOVITE 2024 Poster Competition, Oct 2024 – 3rd Place
- winCode Hackathon – 1st Place
- Math-O-Run – 1st Place
- Young Einstein of The Year 2021