KHUSHI S M

Bangalore, India

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EDUCATION

Presidency University — **Bangalore, India**
Bachelor of Technology in Computer Science - Data Science; CGPA: 7.99 — June 2025

EXPERIENCE

Machine Learning Intern — **Jan 2025 – Present**
Newspace Research and Technologies | PPO, Actor-Critic, Neural Networks, Simulation — Bangalore, India
- Developed a reinforcement learning-based drone swarm using PPO for hovering, obstacle avoidance, and target-reaching.
- Designed reward functions, termination conditions, and feedback systems to improve drone performance. Achieved 93.33% success rate with zero collisions and minimal oscillations.
- Trained 8192 drone simulations in parallel, optimizing policy updates and system stability.

Member — **Sep 2021 - Jan 2022**
Blue Learn Community — Bangalore, India
- Learned about virtual assistant jobs and related concepts, enhancing knowledge and skills in virtual assistance and remote work environments.
- Participated in community discussions and workshops, gaining insights into effective virtual assistance practices.

PROJECTS

Book Recommendation System | TensorFlow, OpenAI API, Streamlit, Collaborative Filtering — Nov 2024
- Developed an 85% accurate hybrid recommendation engine combining popularity-based, collaborative filtering (matrix factorization, cosine similarity), and content-based filtering to address cold-start issues.
- Processed and analyzed 100,000+ book records, optimizing data preprocessing for faster predictions and reducing Streamlit web app response time by 30% with efficient caching
- Integrated OpenAI's GPT-3.5-turbo to generate AI-driven book summaries, enhancing user engagement and decision-making

To-Do List Web App | Spring Boot, Thymeleaf, MySQL, JPA, Bootstrap, Lombok — Apr 2025
- Developed a full-stack task management application using Spring Boot, JPA, and MySQL, enabling users to efficiently add, update, and delete tasks with real-time UI feedback.
- Built a responsive user interface with Thymeleaf and Bootstrap, and applied MVC architecture to ensure clean code separation and maintainability.
- - Leveraged Lombok to reduce boilerplate code and optimized data handling, resulting in improved application performance and scalability.

Real-Time Chat Application | Java, Spring Boot, WebSocket (STOMP), SockJS, HTML, Bootstrap — June 2025
- Built a responsive chat app enabling real-time communication using WebSockets with STOMP over SockJS.
- Designed a dynamic UI with Bootstrap and implemented message broadcasting to all connected clients.
- Developed backend logic using Spring Boot, including WebSocket configuration and message controller.

Potato Disease Classification | Python, TensorFlow, Keras — Jul 2024
- Developed a CNN model to classify potato leaf diseases (healthy, early blight, late blight) with 98% accuracy using the PlantVillage dataset. Applied data augmentation (random flipping, rotation) and preprocessing (resizing, rescaling) to enhance model robustness and generalization.
- Utilized TensorFlow and Keras for model training and optimization, and Matplotlib for visualizing accuracy and loss trends. Implemented version control to manage multiple model iterations for improved performance tracking and reproducibility.

TECHNICAL SKILLS

Languages: Python, SQL, Java, C, HTML/CSS
Technologies/Frameworks/Libraries: Data Structures and Algorithms (DSA), Machine Learning, Spring Boot, Deep Learning, Natural Language Processing (NLP), Computer Vision, Streamlit, PowerBI, Raspberry Pi

ACHIEVEMENTS

- Completed **Junior Diploma in Bharatnatyam**, demonstrating dedication and discipline in the classical dance form.
- Achieved Level-3 certification in **Bharatnatyam** from **Gandharva Mahavidyalaya**, showcasing a high level of artistic skill and commitment.