Sambbhav Jain

Laxmi Nagar , Delhi | sambbhavjain@gmail.com | 9560579228 | linkedin.com/in/sambbhav-jain-0a82b01a0 | github.com/Sambbhavjain

EDUCATION

Jaypee Institute of Information Technology | Noida , India   **Jun 2019 – May 2023**
Bachelor of Technology, Computer Science and Engineering

Bal Bhavan Public School | Delhi, India   **Jul 2019**
Intermediate-95.4%

SKILLS

Languages/Databases: C, C++, Python, ,MySQL,Java, Javascript, MATLAB, Django, Flask,Node JS, MongoDB, PostgreSQL.
Tools/Frameworks: TensorFlow/Keras, PyTorch, ROS,Yolo, Microsoft Azure, GitHub, Jenkins ,Docker, Kubernetes, Anaconda,AWS.
Computer Vision: Object/Human Detection and Tracking, Pattern Recognition.
Image Processing: Digital Image Processing , Image Segmentation ,Medical Imaging.

WORK EXPERIENCE

Software Engineer | Octro Inc. , Noida, India   **Feb 2023 – Present**
- Utilized **K-Means Clustering** to categorize least volatile users for free chips distribution, eventually increasing user engagement by **9%** and user revenue by **~10%** , Enhanced user journey by identifying stuck users through gameplay metrics and executing targeted campaigns
- **Utilizing the open-source Large Language Model (LLM) Llama3 and prompt engineering to create unique personas.** Leading development of interactive dealers with diverse personas in online casino games integrated with Text To Speech model to give voice output, aimed at boosting user engagement by 15-20%
- **Developed and maintained Trinity**, a platform designed to analyze user engagement and visualize insights through dynamic graph generation using **Pandas** for data manipulation and **OpenCV** for advanced image processing.
- **Generated actionable insights** by creating detailed visualizations and graphs using **seaborn** and **matplotlib**, enabling stakeholders to monitor user engagement trends and identify opportunities for revenue optimization.
- **Performed advanced SQL operations**, such as joining large datasets, implementing window functions, and creating stored procedures to handle complex business logic.
- Designed and developed a highly scalable **XML creator tool** using **Python** and **Django**, automating live operations event delivery, which improved internal workflows and reduced manual effort by **70%.**
- Developed revenue prediction models using **linear regression**, **logistic regression**, LASSO regression for forecasting in-game purchases and churn probability.
- Worked in the Automation **QA** Testing team and developed **500+** test cases in Python for reducing the manual effort of QA using Pytest, Appium, Airtest.
- Integrated the Automated Test Suite with **Jenkins** and created a **Pipeline** such that the final build will only be released after passing the **sanity suite**.

Research Intern | Indian Institute of Information Technology , Delhi   **Sep 2022 – Dec 2022**
- Collaborated with a team of researchers(**Center for Biomedical Engineering**) to analyze medical imaging data, including MRI and CT scans, to identify and segment kidney structures using MriCron software.
- Implemented state-of-the-art image processing and machine learning techniques using tools such as Python and libraries like **OpenCV** , **TensorFlow** , **SciKit**-**Learn** to automate the segmentation process.
- Implemented various **segmentation** algorithms like **Adaptive thresholding** , **Fuzzy C-Means** Clustering and compare them to get Dice coefficient 0.951(**95%** accuracy)
- Project is to be used by **AIIMS Delhi** as the doctor's find it hard to segment the kidneys of Small children.

Software Development Trainee | Nagarro , Remote   **Jun 2022 – Aug 2022**
- Experienced in developing and deploying a Twitter clone application utilizing the MERN (MongoDB, Express.js, React.js, Node.js) stack. Led the end-to-end development of a Twitter-inspired application, leveraging the MERN stack to build a feature-rich platform for social networking and microblogging.
- Developed a dynamic and interactive to-do list application using HTML, CSS, and JavaScript to enhance productivity and organization.Integrated features for assigning task priorities and categories, empowering users to prioritize tasks based on importance and organize them efficiently.
- Skilled in designing and developing robust e-commerce solutions using the MERN (MongoDB, Express.js, React.js, Node.js) stack. Experienced in building scalable and feature-rich web applications that deliver exceptional user experiences and drive business growth.

System Engineer Intern | Vimaana Aerospace Technologies, Noida, India   **Jan 2021 – Mar 2021**

- Implemented **real-time object detection** on drone-mounted cameras using **YOLO, Faster R-CNN** models to detect road obstacles, vehicles, and lane markings. Optimized **computer vision pipelines** for efficient processing on embedded systems, improving autonomous navigation and road monitoring capabilities.

- Implemented autonomous mission planning algorithms and obstacle avoidance systems using ROS packages like **MAVROS**, enhancing operational safety and efficiency.Conducted extensive calibration and tuning of drones, including PID controller adjustments, motor balancing, and ESC configurations, to achieve reliable flight dynamics.

PROJECTS

Automated Kidney Segmentation from MRI image
- Automate the process of Kidney Segmentation using various segmentation algorithms like **Fuzzy C-Means** and **Adaptive Thresholding** using various Python libraries like **Tensorflow**, **Scikit**,**Sklearn**.
(Accuracy:**95.2%**).

Calorie estimation using deep learning
- Utilized deep learning techniques to develop a calorie estimation system capable of analyzing food images and predicting calorie content. Leveraged convolutional neural networks (CNNs) to extract meaningful features from food images, enabling accurate estimation of calorie intake.

Graph Neural Network based Movie Recommender System
- Developed and implemented a movie recommender system leveraging Graph Neural Networks (GNNs) to enhance recommendation accuracy and personalized user experiences. Integrated techniques from graph theory and deep learning to model user-item interactions