SEMAL JOHARI

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EDUCATION

Gautam Buddha University, Greater Noida, UP *August, 2021 – May, 2025*
BTech in CSE with Specialization in Machine Learning *(CGPA: 9.46)*

TECHNICAL SKILLS

Languages: Python, SQL, HTML-CSS, R, JavaScript, Dart, C, DAX
Frameworks: Flask, Numpy, Keras, TensorFlow, Streamlit, Scikit-Learn, Matplotlib, PyTorch, OpenCV, SciPy, Seaborn, Pandas, BeautifulSoup, Sweetviz, HuggingFace, FastAPI, Django
Softwares & Tools: Power BI, Git & GitHub, VS Code, PyCharm, Jupyter Notebook, Google Colab, Microsoft Excel, MATLAB
Cloud Platforms & MLOps: Microsoft Azure, Google Cloud Platform, Amazon Web Services, Weights & Biases

WORK EXPERIENCE

PurpleME India OPC Pvt Ltd | Data Analyst Intern *November, 2024 – February, 2025, New Delhi, Delhi*

- Analyzed and visualized the financial and sales data for business clients using advanced Microsoft Excel, Power Query, and DAX programming for designing and developing interactive dashboards in Power BI and Tableau, by integrating and transforming data from multiple sources, including Excel, SQL databases, and dynamic feeds from QuickBooks.
- Built PowerApps solutions, including an automated expense management system, leveraging Power Automate flows to streamline invoice processing by uploading invoices to the app to SharePoint documents library and dynamically capturing their details in Excel.

Stillsweb Technologies Pvt Ltd | Image Processing & AI Intern *June, 2024 – September, 2024, Noida, UP*

- Worked on multispectral data from satellites like Sentinel-2 and LandSAT for the estimation of the local climate, vegetation indices and soil types in different farms to derive patterns for the types of crops grown due to the given factors for developing a recommendation engine to assist farmers in selecting the crops to grow in specific regions.
- Leveraged the derived patterns and demonstrated the results through a data analytics dashboard. The primary responsibilities included Spatial Data Research, Data Collection and Assessment, Crop Health Analysis and Vegetation Indices analysis.

Omnipresent Robot Technologies Pvt Ltd | Machine Learning & IoT Intern *July, 2022 – August, 2022, Greater Noida, UP*

- Worked on developing a software for serving the purpose of object detection and recognition for an Indoor Autonomous Warehouse Drone using Computer Vision, Deep Reinforcement Learning and IoT technology for drone navigation, perception and control.
- Utilized various Python frameworks like PyTorch and OpenCV for point cloud 3D mapping in the drone's unknown environment.

PROJECTS

Chess AI Engine | *GitHub* *November, 2024 - Present*

- This Reinforcement Learning application, built from scratch using Pygame framework of Python, is a Chess Engine trained using advanced optimization algorithms like Minimax with Alpha-Beta Pruning for strategic decision-making.
- Its key features include the basic rules of chess – move generation for each piece, their validation, pawn promotion, En Passant, Kingside and Queenside Castling, Checkmate and Stalemate and a display of Move logs using chess notations. Currently working on improving the user interface by adding a menu for flipping the board, choosing the piece for pawn promotion, mouse drag and the engine by adding a 50 move and 3-time repetition rule for Stalemate and adding a database for openings and endgames.

JARVIS – Voice Assistant | *GitHub* *October, 2024*

- This application is a robust voice assistant designed to run on the local machine, inspired by the JARVIS voice assistant from the Marvel Universe. It utilizes facial authentication for secure access to the application and listens for specific trigger phrases (hot words) to activate or turn off the voice assistant.
- Its core features include providing intelligent responses to user inquiries through a chatbot interface, opening websites seamlessly in the default browser, initiating applications installed on the local machine, playing videos directly from YouTube, sending messages to contacts via WhatsApp or SMS and making phone calls through WhatsApp or from the mobile device.

Autonomous Vehicle Perception | *GitHub* *September, 2024 - October, 2024*

- This MLOps (Machine Learning Operations) Project performs Semantic Segmentation on the BDD100K dataset, which contains thousands of images of self-driving cars using a Weights and Biases dashboard. The aim of this project is to perceive the object in front of the car, be it a traffic light, the road, a vehicle or a person.
- The model is then optimized through hyperparameter tuning and evaluated using individual IOU (Intersection over Union) scores. The results of the model training, optimization and evaluation through individual reports, along with the details of job and sweep runs are given at *Weights and Biases Workspace*.

PUBLICATIONS

(1) Johari, S., & Singh, P. (in press). Cognitive Intelligence and Big Data: A Symbiotic Approach to Predictive Analytics in Healthcare. *IEEE Xplore.* 2025
(2) Johari, S. (in press). From Pixels to Perception: Refining Depth Estimation Techniques in 3D Vision Systems for Automated Inventory Management using Deep Learning-Driven Approaches. 2025

ADDITIONAL INFORMATION

Certifications: Microsoft Certified: Azure Data Scientist Associate by Microsoft, Career Essentials in Generative AI by Microsoft and LinkedIn, Artificial Intelligence Virtual Experience Program by Cognizant, SQL (Advanced) by HackerRank, AWS Knowledge: Cloud Essentials by AWS, Data Analytics and Visualization Job Simulation by Accenture, Machine Learning with Python by IBM

Achievements: First Position in Microsoft Azure Blogathon by ID8NXT and Microsoft Azure