



# DASHPREET SINGH

## ML/AI ENGINEER

### ABOUT ME

Passionate Machine Learning Engineer with a track record of successfully delivering scalable and efficient AI/ML solutions. By having extensive interest in artificial intelligence, machine learning, data science, deep learning and to work on R&D-type projects, I aim to leverage my knowledge, experience and skills to drive progress and add value to an organization. However, I am committed to staying updated with the latest advancements in AI/ML technologies and applying them effectively to drive impactful outcomes.

+91 9560762853

dashpreetsinghofficial@gmail.com

linkedin.com/in/dashpreet-singh-28a297199

A-83 second floor, himgiri enclave, chandervihar, nilothi extension, nangloi New Delhi -110041

### SKILLS

- GPT
- LLM
- Machine Learning
- Supervised Learning
- Deep Learning
- Pandas
- Scikit- Learning
- Web Scraping
- Tensor Flow
- Open CV
- Pytorch
- NLP
- Flask
- Deep Face
- DLIB
- PowerBI
- Jupyter Notebook
- Linux
- Jira
- BitBucket
- Open AI
- Python
- Data Science
- Unsupervised Learning
- Numpy
- Matplotlib
- Scipy
- Selenium
- Yolo
- Torch Vision
- Tensorflow Zoo
- Postman
- OCR
- Keras
- Tableau
- C, C++
- Google Collab
- SQL
- GitHub
- C#

### WORK EXPERIENCE

#### Jan 2024 - Present | Emcode Technology LLC

##### Junior Machine Learning Engineer

###### MULTI-CAMERA MULTI-VEHICLE TRACKING WITH AI VIRTUAL CITY - PROJECT

In this project, 'Carla' is utilized to generate synthetic data of a virtual city. Following the "Multi-camera vehicle tracking system for AI city" article, the "electricity" (efficient multi-camera vehicle tracking system for intelligent city) method is employed to implement multi-camera vehicle tracking.

###### HIDDEN MARKOV MODEL FOR PREDICTION OF FUTURE LOCATION - PROJECT

In this task, the objective is to predict the future location using past data. Initially, a KNN model and prediction script are prepared for plotting the vehicle's location on a map. Subsequently, a "hidden markov model" (HMM) is developed to forecast the future location from the current location along with the associated probability.

###### LLM VOICE ASSISTANT - PROJECT

Tasks included are as follows - using speech recognition, pytsx, OpenAI LLM, gTTS and OpenAI Whisper, a script for an LLM voice assistant is prepared to provide answers and information in English and Arabic. Additionally, a training script for fine-tuning OpenAI LLM generated responses based on custom data that is prepared.

###### CAR DESTINATION PREDICTION - PROJECT

Tasks included are as follows - data cleaning, feature preparation, training KNN and Random Forest models and creating a prediction script to determine the last location of the car based on inputs of time, latitude, longitude and model.

#### September 2023- February 2024 | Intellypod

##### Software Developer

###### OPENAI LLM CHATBOT - PROJECT

In this project, I had conducted research and development (R&D) proof of concept (POC) on OpenAI LLM, google vertex LLM and microsoft copilot to determine the best results among them. Moreover, I created an OpenAI LLM chatbot capable of reading PDFs, excel files, text files, web URLs and storing the data into a knowledge base. LLM then provided answers related to the data. Additionally, I had managed AI team in terms of support and task assignment.

###### LEADS GENERATOR - PROJECT

In this project, I prepared a script using Regex to find the pattern of names, address, emails, countries, resorts and vendors from the docx data. The data then converted into an Excel format and an .exe file was prepared for the client.

# EDUCATION

- **January 2023 - Present | Amity University**

Pursuing: MCA (Masters of Computer Applications in Artificial Intelligence & Machine Learning)

- **August 2019 - August 2022 | Ganga Institute of Technology and Management (Maharishi Dayanand University)**

BCA (Bachelors of Computer Applications)

- WEB SCRAPPING - PROJECT

In this project, I utilized the Selenium library and prepared a script for web scraping for Wyndham Resort website. The scraped data was stored in an SQL database. Additionally, a scheduled script was prepared automatically running the web scraping script on time. Also worked on developing APIs using Flask.

- HIFI-GAN: GENERATIVE ADVERSARIAL NETWORK FOR EFFICIENT AND HIGH-FIDELITY SPEECH SYNTHESIS - PROJECT

In this project, I followed an article on GAN Speech Synthesis to create synthetic data of LJSpeech. I trained our own model and script to generate synthesized speech.

**September 2022- September 2023 | Yoma Technologies (BYLD GROUP)**  
**Python Developer**

- SPEAKER DIARIZATION - PROJECT

In this speaker diarization project, we separated two distinct human voices. We utilized speech recognition to detect the language. Then, we employed OpenAI whisper to embed and transcribe all the text. Subsequently, We utilized NVIDIA NEMO which included VAD (voice activity detection Method), speech detection, speech segmentation, embedding, clustering and speaker labels to identify the speaker and after separation, we used 'emotion detection' on the caller's text to calculate the review and performance of the caller employee.

- SHELF MONITORING/TALKER - PROJECT(Object Detection)

In this project, I was involved in a shelf monitoring initiative focused on Identifying products such as dabur, zydus, colgate, etc. as well as detecting promotional tags like POSM. My responsibilities included working on the Code for POSM detection, object detection and training the YOLOv5 model. Moreover, I undertook image annotation for the same dataset. For testing Purposes, I'd also developed a Flask API. Additionally, I played a role in managing the labeling team, overseeing data collection, task assignment and coordinated daily activities with the team.

- ID CARDS DETAILS EXTRACTION (OCR) - PROJECT

In this project, we extracted the details from various documents such as aadhar cards, pan cards, driving licenses, GST documents, chequebooks and Voter ID's. We utilized PaddleOCR and trained a TensorFlow Zoo model efficiently Det D0 512X512, annotated and labeled over 3000 images. Additionally, I incorporated Flask API, OpenCV, and regular expressions (REGEX) to create patterns and retrieved the details from ID cards using Regex.

## INTERNSHIP EXPERIENCE

**June 2022 - August 2022 | Spektra Systems**  
**Software Development Engineer**

- IMAGE CLASSIFICATION - PROJECT

This project involved predicting the health of crops and plants for farmers using TensorFlow, a CNN model and Python. Also, created the code from scratch and conducted testing on a Flask API.

**March 2022 - May 2022 | Technocolab Systems**  
**Data Scientist**

- EXPLORATORY DATA ANALYSIS - PROJECT

This project utilized ML models including the Smotenn algorithm to predict the credit risk level as either low or high for loans with varying degrees of risk.

- VOICE ASSISTANT - PROJECT

This voice assistant worked on speech recognition and completed tasks automatically by using libraries speech recognition, pyttx3, python and NLP (Natural Language Processing)