Sidharth Arya

MACHINE LEARNING ENGINEER

Bangalore, India

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Professional Summary

Machine Learning Engineer with 2+ years of experience in Tensorflow, PyTorch, ONNX, and scikit-learn. Expertise in Deep Learning, MLOps, Data Science, and DevOps. Proven ability to develop and deploy AI solutions that solve real-world problems.

Skills

Deep Learning Tensorflow, Pytorch, Onnx

Computer Vision OpenCV, OpenMMLab

Natural Language Processing (NLP) Langchain, SpaCy, Transformer, HuggingFace, Bert, GPT

Generative AI Stable Diffusion, Large Language Models (LLM), ChatGPT, Gemini

Machine Learning Scikit learn, Gurobi

Data Science & Artificial Intelligence Pandas, Numpy, Scipy, Plotly

Data Pipeline Hadoop, Hive, Spark, Superset

DevOps, MLOps, LLMOps AWS, Google Cloud, Hetzner, Runpod, Docker, Kubernetes, Vagrant, Terraform, Jenkins, CircleCI, Bitbucket Pipeline, Github Actions, Systemd, Python Ray

Backend Django, Express, Tornado, Nodejs, REST API

Frontend Hugo, Astro, React, Vue, HTML5, LESS, SASS

Programming Python, Nodejs

Database Postgres, MySQL, SQLite, MongoDB, Firestore, ODBC

Soft Skills: Critical Thinking, Problem Solving, Creativity, Leadership

Languages: English, Hindi

Education

National Institute of Technology (NIT)   *Bhopal, India*

M.TECH IN ARTIFICIAL INTELLIGENCE   *Sept. 2020 - Jul. 2022*

Delhi Technological University (DTU)   *Delhi, India*

B.TECH IN ENGINEERING PHYSICS   *Aug. 2014 - Aug. 2018*

- **Major: Electronics**
- **Minor: Robotics and Intelligent Systems**

Certifications

Machine Learning   *Online*

STANFORD UNIVERSITY   *2020*

Andrew Ng.

Neural Networks and Deep Learning   *Online*

DEEPLEARNING.AI   *2021*

Andrew Ng

Work Experience

Aftershoot Inc   *Delhi*

MACHINE LEARNING ENGINEER   *November 2022 - July 2023*

User Pipeline   `Python` `AWS Lambda` `Bash`

Developed a user AI agent that automates user modifications to AI output, enhancing user experience and streamlining workflows

Optimized training   `Python` `Tensorflow`

Developed a robust training pipeline that enables efficient evaluation of user-defined models across various optimizers, loss functions, and data selection strategies

Head Pose Detection   `Python` `Tensorflow` `ONNX`

Developed a high-accuracy model for predicting all three angles (yaw, pitch, roll) of a person's head, enabling real-time head pose estimation

MLOps Setup   `kubernetes` `kubeflow` `Nvidia Mig`

Established a scalable and efficient MLOps infrastructure using Kubeflow and custom Docker images, enabling streamlined ML team workflows and optimized resource utilization reducing cloud costs by upto 50%

Gida Technologies India Pvt. Ltd.   *Bangalore*

DATA SCIENCE ENGINEER   *June 2021 - October 2022*

Audio Denoiser (POC)   `Python` `Pytorch` `ONNX` `Deep Learning`

Developed a real-time audio denoising system that effectively removes ambient noise, enhancing audio quality and improving speech recognition accuracy.

Manufacturing Scheduler(POC)   `Ray` `Python` `Linux` `Systemd` `GCP` `Machine Learning`

Optimized and scaled a production scheduler using genetic algorithms, resulting in improved efficiency and performance across multiple virtual machines.

Card Detection   `Python` `OpenCV`

Developed an OpenCV-powered metro card identification application that utilizes advanced feature recognition for precise and efficient card scanning, streamlining the user experience.

Packaging Scheduler   `Django` `Nodejs` `Gurobi` `ML`

Developed a solver application for multi-day, multi-shift pharmaceutical packaging management, optimizing production efficiency and reducing costs by upto 80%

Rapid Investigator   `Tornado` `Data Pipeline`

Led the full-stack development of a data pipeline with a user-friendly interface, enabling data-driven insights and improved decision-making in pharmaceutical operations.

Openemr and Mangento, Setup and Testing   `PHP` `Nginx`

Orchestrated and scaled OpenEMR and Magento using Kubernetes, improving reliability, scalability, and performance.

Indian Oil Corporation Limited   *Noida*

INTERN - WEB DEVELOPER   *June 2017 - July 2017*

Complaint Management System   `Python` `Django`

Craft Worldwide   *Mumbai*

INTERN - WEB DEVELOPER   *June 2015 - July 2015*

Frontend and Application Development Work   `HTML` `CSS` `SCSS` `Javascript`

Open Source Contributions

comp-ide.el *Github*
Emacs Lisp, Bash *2019*
• A simple IDE for competitive programming using emacs

modular-config.el *Github*
Emacs Lisp *2018*
• An init file module handler for emacs
• Dividing the init file into multiple modules

Crypto Tracking Bot *Github*
Python, Telegram SDK, Bash *2018*

A tracking bot for cryptocurrency

Extracurricular Activity

2007	**3rd Place**, Zonals Gymnastics Championship, *Indira Gandhi National Sports Complex*
2008	**2nd Place**, Zonals Gymnastics Championship, *Indira Gandhi National Sports Complex*
2011	**Finalist**, Inter-school Football, *St. Paul's School*
2012	**1st Place in School**, National Science Olympiad, *St. Paul's School*
2013	**2nd Place**, Website Development Competition, *Green Fields School*

References

Available upon request

Projects

Stock Market Trading bot *Personal*
Python, Telegram, Conky, Machine Learning *Ongoing*
Developed a stock trading system using the 5paisa Python API and backtesting strategies with Python Backtrader, enabling automated and data-driven trading decisions.

Graph Neural Network Based Delay Estimation Of Large Computer Network *MANIT, Bhopal*
GNN, Routenet, Deep Learning *2022*
Utilized graph neural network-based route estimation to analyze the impact of node and path interactions on network performance metrics, enabling efficient network design and optimization.

Human Activity Recognition with Deep Learning
MANIT, Bhopal
CNN, CNN-LSTM, LSTM-CNN, LSTM, CNN-GRU,GRU-CNN, GRU, Deep Learning *2021*
Evaluated various deep learning models, including convolutional, gated recurrent, and long short-term memory networks, for accurate human activity recognition.

Gait classification framework based on Ensemble Learning *MANIT, Bhopal*
CNN, GRU, Deep Learning *2021*
Ensemble learning on the task of gait recognition using CNN.

Computer Vision With Audio Aid
Delhi Technological University, Delhi
CNN, GRU, OpenCV, Python, Deep Learning, Machine Learning *2018*
Developed a real-time object recognition system using Viola Jones Algorithm and Single Shot Multibox detector algorithm, enabling audio feedback for visual information.