Ishwar Sawale

Data Scientist · Machine Learning Researcher

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Summary

I have 3.2+ years experience in Data Science. I am currently working with Mindstix Software Labs as a Data Scientist/ML Engineer. I am Research Engineer focus on data-driven solutions for Deep Learning, Computer Vision and Chat Bot based systems.
Prior to Mindstix, I was working with Coriolis Technologies Pvt Ltd for 2 years as Machine Learning Engineer.
I also have completed 115+ courses related to Machine Learning, AI from Udemy, Coursera, Datacamp, & Linkdin Learning.

Education

Diploma in Big Data Analyatics
Pune, India

CDAC-ACTS PUNE — *Aug 2015 - Feb. 2016*

- Achived grade A with 70.00%

BE E & TC
Pune, India

University Of Pune — *Aug. 2011 - May. 2014*

- Achived Distinction with 69.33%

Diploma in E & C
Mumbai, India

MSBTE, Mumbai — *May. 2008 - Aug. 2011*

- Achived Distinction with 85.38%

Work Experience & Responsibility

Mindstix Software Labs
Pune, India

Data Scientist — *Feb. 2018 - PRESENT*

- Computer Vision Research
- Question & Answer ChatBot Research
- Deep Learning Algorithm Research
- Algorithm Design

Coriolis Technologies
Pune, India

Member of Technical Staff — *Mar. 2016 - Feb. 2018*

- Deep Learning Algorithm Design
- License Plate Recognition, Face Recognition

Projects

Chatbot HR
Mindstix Software Labs Project

Python, TensorFlow, RASA — *Feb 2018 - Present*

- Developed custom NLU & Dialogue component for entity, intent detection, Dialogue managment
- Developed context based retrival for unstrcutred data like website paragraph etc.

Color Constancy Algorithm
Mindstix Software Labs Project

Python, OpenCV, Dlib, CNN — *Feb 2018 - Feb 2019*

- Algorithm development to get true skin color from the image, independent illumination conditions
- Color difference delta E between photo spectrometer and the developed algorithm is < 2.38

Face Recognition System
Mindstix Software Labs Project

Facenet, Dlib, SVM, KNN, Python — *Feb 2018 - April 2018*

- From Facenet and Dlib face embedding extracted
- Based on obtained embedding three diffrent classification models are trained
- To tackle uknown person problem and increase accuracy, these three models stacked together

License Plate Recognition System
Coriolis Tech Project

OpenCV, Deep Learning, Python — *March 2016 - Feb 2017*

- This project was used to auto-detect License Plate in car and fetch license number
- I have used OpenAlpr library along with handcrafting features for License Plate detection
- Custom OCR was trained and used to predict each individual number from license plate

Skills & Courses

Tools	Git, LaTeX
Stacks	MongoDB, MySQL
Languages	Python
Machine Learning	Tensorflow, Keras, Pytorch, OpenAI

PyImageSearch

- PyImageSearch Gurus Graduate by PyImageSearch

Coursera

- Structuring Machine Learning Projects by deeplearning.ai
- Neural Networks and Deep Learning by deeplearning.ai
- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization by deeplearning.ai
- Recommender Systems: Evaluation and Metrics
- Nearest Neighbor Collaborative Filtering
- Matrix Factorization and Advanced Techniques
- Introduction to Recommender Systems: Non-Personalized and Content-Based
- Fundamentals of Digital Image and Video Processing by Northwestern University
- PCA by Imperial College London
- Multivariate Calculus by Imperial College London
- Linear Algebra by Imperial College London
- Mathematics for Machine Learning, a 3-course specialization by Imperial College London
- How Google does Machine Learning by Google Cloud

Datacamp

- Machine Learning with Python Track
- Data Scientist with Python Track
- Data Manipulation with Python Track
- Data Analyst with Python Track
- Importing & Cleaning Data with Python Track
- Data Scientist with R Track
- Data Analyst with R Track
- Importing & Cleaning Data with R Track
- Machine Learning with R Track

Open Source Projects

Facial Key Point Detection
Open Source Contribution

TENSORFLOW, KERAS, PYTHON — *Sept 2018*

- Faceial Key point detection model trianed on Kaggle Dataset.
- Trained Various models Using Keras & Tensorflow, with multiple optimizers.

Neural Style Transfer App
Open Source Contribution

CNN, PYTHON, KIVY — *July 2018*

- This app is a TensorFlow implementation of the paper A Neural Algorithm of Artistic Style by Leon A. Gatys, Alexander S. Ecker, and Matthias Bethge.
- The paper presents an algorithm for combining the content of one image with the style of another image using convolutional neural network.

Prodcutivity ChatBot
Open Source Contribution

NLU, FLASK, SLACK — *June 2018*

- Track How much time spend on which task, based on given input this bot extracts intent & slots using NLU
- Once itent & entity predicted, then detected task is added into DB

Face Recognition Library
Open Source Contribution

FACENET, PYTHON — *Mar 2018*

- Face Recognition working with one API call
- Based on Facenet, available as pip package

Real Time Face Recognition
Open Source Contribution

PYTHON, TENSORFLOW, FACENET, KERAS — *Sept 2017*

- This project was to detect and recognise faces in real time(in video)
- Apart from Traditional methods of face recognition, I have used embedding of two faces as measure to differentiate them
- Pretrained model from Facenet is retrained for my dataset
- I have taken video frame at x miliseconds
- After that, created embedding and compared with model for each frame

Festival Recognition App
Open Source Contribution

JAVA, TENSORFLOW, ANDROID — *Aug 2017*

- This is an android app, which detects type of Indian Festival after taking image from Camera or gallery
- For this app I have collected thousands of images for Holi, Diwali, Eid, Birthday, Marriage
- Then I used Inception V4 model from ImageNet and retrained it on above dataset
- This retrained model is optimised for Android by rounding graph and making it compitable for android platform