Ishwar Sawale

Data Scientist · Machine Learning Researcher

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Summary

I have 2+ years experience in Data Science. Currently, I am working with Mindstix Software Labs as Data Scientist. At Mindstix I am working on Recommendation, ChatBot & Face Recognition Systems.
Prior to Mindstix, I was working with Coriolis Technologies Pvt Ltd for 2 years as Machine Learning Engineer.

Education

Diploma in Big Data Analyatics — *Pune, India*

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

- Achived grade A with 70.00%

BE inElectronics & Telecommunication — *Pune, India*

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

- Achived Distinction with 69.33%

Diploma in Electronics & Communication — *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*

- Recommendation Systems for Retail Business
- ChatBot Framework Based on RASA NLU
- Face Recognition Systems

Coriolis Technologies Pvt Ltd — *Pune, India*

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

- Developer & Scrum Master for Cloud Team
- Rails Backend Development for Orchestration tool
- Development of Ansible, Chef and Puppet configuration managers
- License Plate Recognition, Face Recognition

Skills & Courses

Tools	Git, LaTeX
Stacks	MongoDB, MySQL, Neo4J
Languages	C, Python, Java, Go, R
Frameworks	Ruby On Rails
Web Technologies	HTML
Machine Learning	Tensorflow, Keras, Pytorch, OpenAI

Courses

- Neural Networks and Deep Learning by deeplearning.ai on Coursera
- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization by deeplearning.ai on Coursera
- Structuring Machine Learning Projects by deeplearning.ai on Coursera
- Artificial Intelligence A-Z Learn How To Build An AI on Udemy
- Deep Learning A-Z Hands-On Artificial Neural Networks on Udemy
- Practical Deep Learning with PyTorch on Udemy
- Machine Learning A-Z Hands-On Python & R In Data Science on Udemy
- The Complete Android Kotlin Developer Course on Udemy
- Complete iOS 11 Machine Learning Masterclass Course on Udemy
- Deep Learning and NLP A-Z™: How to create a ChatBot on Udemy
- Complete Guide to TensorFlow for Deep Learning with Python on Udemy
- CWorkshop in Probability and Statistics on Udemy
- Building Practical Recommendation Engines on Udemy
- ChatBots: Messenger ChatBot - DialogFlow and nodejs on Udemy
- Introduction to Recommender Systems: Non-Personalized and Content-Based on Coursera
- Nearest Neighbor Collaborative Filtering on Coursera
- Recommender Systems: Evaluation and Metrics on Coursera
- Matrix Factorization and Advanced Techniques on Coursera

Machine Learning Section

Face Recognition Library — *Open Source Contribution*

Facenet, Python

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

User-User Collaborative Filtering — *Mindstix Software Labs Project*

Neo4J, Python

- Personalized recommender algorithm which learn from past agreements to predict future agreements
- It uses the concept of similarity in order to identify users
- Instead of traditional approach of matrix factorization, Graph database is used

User-Item Content Based Filtering — *Mindstix Software Labs Project*

TensorFlow, Python

- Singular Value Decomposition (SVD) is used to estimate the size of the basket that we want to predict
- In the second step, we will predict n products which we believe that user will buy in his next order
- TensorFlow based implementaion of SVD

Face Recognition System — *Mindstix Software Labs Project*

Facenet, Dlib, Python

- 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 Project*

OpenCV, Python

- 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

Cancer Survival Prediction *CDAC Project*

R

- This was group project. My role was to develop & predict model for survival of patients
- Dataset was obtained from seer.cancer.org and it has various cancer types with patients data
- Hypothesis was if cancer is detected in early stage and at early age then chances of patients survival are more

Real Time Face Recognition *Open Source Contribution*

Python, Tensorflow, Facenet, Keras

- 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

- 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

Hand written digits classification *Open Source Contribution*

Java, Tensorflow, Android, Keras

- This is an android app, which detects number drawn by user between 0 to 9
- I have used MNIST dataset for training two diffenet model with Tensorflow and Keras
- User can draw any digit and prediction from two models are given

Data Science Section

Ghouls, Goblins and Ghosts *Open Source Contribution*

Numpy, Pandas, Sklearn *kaggle.com*

- "Ghouls, Goblins, and Ghosts... Boo!" dataset from Kaggle.com
- Classify monsters based on input parameters
- Used SVM, RandomForest classifiers

Machine Learning from Disaster *Open Source Contribution*

Numpy, Pandas, Sklearn *kaggle.com*

- "Titanic: Machine Learning from Disaster" dataset from Kaggle.com
- This is a binary classification problem
- Predict whether passenger survived or not

Publication Section

Real time Face Recognition Article *Open Source Contribution*

Linkdin Article *Sep 2017*

- Article about Face Recognition in Video

REST Client in GO *Open Source Contribution*

Linkdin Article *Sep 2017*

- Article about writing curl like tool in GO lang

Indian Festival Recognition App *Open Source Contribution*

Linkdin Article *Aug 2017*

- Article about how to retrain Inception V4 model & use it in Android app

MNIST Demo on Android *Open Source Contribution*

Linkdin Article *Aug 2017*

- Article about using TensorFlow in Android app

Core Development Section

Orchestration Chef, Puppet, Ansible *Client Project*

Rails, Mongo, Chef, Puppet, Ansible,

REST API

- I was working as Team Lead and Lead Developer for this project
- Use case is - client have certain products that need to be managed using configuration manager
- Using either Chef, Puppet or Ansible, we can perform job like install agent, register agent, upgrade agent etc

Soap client in C *Client Project*

C, SOAP

- I maintained & added new features

REST API client in GO Lang *Client Project*

Go, REST Client

- I developed this app, which is replacement of curl

Automate Instance Creation AWS *Client Project*

Bash, AWS CLI, AWS

- Tool for migration of VMware vSphere OVA to AWS AMI

Migrate Existing OVA to Azure *Client Project*

Bash, Azure CLI, Azure

- Migration of VMware vSphere OVA to Azure

Rails Backend Development *Client Project*

Ruby, Rails, Mongo, REST API

- It was dating app, just like tinder
- REST API implementation for various feature request

Android Apps in Kotlin *Open Source Contribution*

Kotlin, Android

- Android Apps using Kotlin language