Ishwar Sawale

Natural Language Processing & Computer Vision · Deep Learning & Machine Learning Engineer

 ishwarsawale.github.io | ishwarsawale | courses | ishwarsawale

Summary

I am a Software Engineer working on Machine Learning & Data Science algorithms for 4.4+ Years. I am currently working with Indegene Inc on research and development for healthcare and pharmaceutical enterprises.

I have experience in AI product research and development; in the domain such as Natural Language Processing, Computer Vision & Conversational Agents.

Before Indegene, I was working with Mindstix Software Labs as Solutions Architect Data Science, developing Machine Learning solutions for the clients.

As Software Engineering is improving steadily, to keep up with the industry, I have also completed 159+ courses related to Machine Learning, Software Engineering, etc. from Udemy, Coursera, Datacamp, & LinkedIn Learning.

Professional Experience

Sr Data Analyst - Indegene Inc

IMC Auto Authoring   **Python, Tensorflow, NER**   *May 2020 - Present*

- Meta Data Auto tagging, NER extraction, Layout recommendation etc

Data Science Solution Architect - Mindstix Software Labs   *VMware Inc*

Genie Speaker Recognition   **Python, Tensorflow, CNN, ResNet, ANN Indexing, VLAD**   *Dec 2018 - Present*

- This is a text-independent **speaker recognition system** built using deep neural network. It is based on **ResNet** architecture with **NetVLAD & GhostVLAD** layers. This is a three-stage system consists mainly of Development, Enrollment & Verification stage.

- In the Development stage, I have created new modified **thin ResNet** architecture with **34 layers** & **3 million parameters**. It is trained end-to-end for speaker recognition on **10GB of speaker data for 8K Classes** using **Adam optimizer with additive margin softmax (AM-Softmax) loss.**

- In the Enrollment stage, created a **speaker-specific model using embeddings** extracted from previously trained model. In the Verification stage, used high dimensional **Approximate Nearest Neighbour Indexing** to predict nearest match for test input.

Machine Learning Engineer - Mindstix Software Labs   *VMware Inc.*

Genie Digital Assistant   **Python, Tensorflow, Keras, LSTM, Rasa**   *Feb 2018 - Aug 2019*

- This application is a digital chatbot assistant helping customers to get their issues resolved. Built the **Natural Language Understanding** framework for entity recognition, intent classification & dialogue management using **LSTM architecture** along with other libraries like **Spacy, Rasa**, etc.

- Created **Frequently Asked Question** service using **Universal Sentence Encoder**

Computer Vision Engineer - Mindstix Software Labs   *Estée Lauder Companies Inc.*

Foundation Recommendation Engine   **Python, OpenCV, Computer Vision, Deep Learning, Tensorflow**   *Feb 2018 - Dec 2019*

- Created a new **Fully Convolutional Network using AlexNet** architecture with a **domain-specific loss** function.

- Using developed algorithm, color corrected image is generated basis which skin tone of a person is calculated using statistical methods.

- Built **Product recommendations** based on the user's preferences & extracted skin tone.

Machine Learning Engineer - Coriolis Technologies

License Plate Recognition System   **CNN, OpenCV, Python, Object Detection, Classification, YOLO**   *March 2016 - Feb 2018*

- An **Automatic License Plate Recognition System using Deep Learning algorithms** for Indian vehicles.

- I have **trained 5 different YOLO CNN Networks** for vehicle detection, prediction of the bounding box for License Plate, character segmentation, alphabet recognition & digit recognition.

Skills

Languages & Frameworks	Tensorflow, Keras, Pytorch, Python, Django, Flask, Pandas, Numpy, Matplotlib, GO, Ruby, Rails
Machine Learning	Regression Algorithms, Decision Trees, SVM, Navie Bayes, kNN, K-Means, Random Forest etc.
Deep Learning	CNN, ResNet, DenseNet, Inception, MobileNet, RNN, LSTM, Chatbot
Computer Vision	Classification, Object Detection, Segmentation, Color Correction, Image Processing

Education

Diploma in Big Data Analytics *Pune, India*
CDAC-ACTS PUNE(70%) *Aug 2015 - Feb. 2016*

Bachelor of Engineering *Pune, India*
SINHGAD ACADEMY OF ENGINEERING, PUNE (69.33%) *Aug. 2011 - May. 2014*

Courses List

PyImageSearch
- PyImageSearch Gurus Graduate by PyImageSearch

Coursera
- **Mathematics for Machine Learning, a 3-course specialization by Imperial College London**
- **TensorFlow in Practice Specialization by deeplearning.ai**
- 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
- How Google does Machine Learning by Google Cloud

Datacamp
- Machine Learning with Python Track
- Data Scientist with Python Track
- Image Processing 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