Ambir Patel

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WORK EXPERIENCE

PIVOTCHAIN SOLUTIONS | Data Scientist — Pune | Dec 2019 – Present

- Responsible for building **scalable**, **end-to-end** deep learning solutions which detect abnormal activities in **real-time**.
- Developing backend logic for the applications and **Rest API**s for interacting with the frontend.
- Optimizing codes and models for rapid processing of video without GPU (**Model Pruning, OpenVino Toolkit**).
- Raven-**VOI** (Vehicle of Interest):The System detects/tracks and stores details of the vehicle in the database. **YoloV5** model is used to detect vehicle and number plate, **Easyocr** for extracting number plate information.
- Raven-**Logistics**: Detects cargo mishandling and also tracks operations/activities inside the logistics warehouses. **Mobilenet** models are used for object detections and activity is recognized using **Optical Flow** and **SVM**.
- Also working on **Face Recognition**(FR) system. Used TensorFlow's **facenet** to calculate embeddings and improved FR accuracy by **10** % using Facebook research's **faiss** library to match embeddings.

CENTRE FOR MODELING AND SIMULATION | Research Student — Pune | June 2018 - Dec 2019

- Worked with **Python/R** on Machine learning algorithms such as Linear and Logistic Regression, KNN, SVM, Random-forest, K-means etc.
- Studied mathematics of Networks, **Graph theory**, and algorithms like BFS, DAG, Dijkstra's, Kernighan-Lin, etc.
- Learned and implemented various Deterministic and Stochastic **optimization techniques**.

SVANETR INNOVATIONS | Intern — Pune | Feb 2018 – Jun 2018

- Responsible for developing CAD models and Rapid Prototyping using 3D-printer.

SKILLS

Languages: Python
Technologies: Git, AWS, MongoDB, Postman
Frameworks: Tensorflow, Pytorch, Numpy, OpenCV, Flask
Orchestration: Docker, Kubernetes

EDUCATION

Master of Technology in Mathematical Modeling and Simulation — CGPA 8.23
Centre for Modeling and Simulation, Pune University — 2018 - 2020
Specialization: Machine Learning | Complex Networks

Bachelor of Engineering in Mechanical Engineering — CGPA 6.5
Solapur University — 2012 - 2016

PROJECTS

OBJECT LOCALIZATION USING REINFORCEMENT LEARNING — Python, Tensorflow, DQN, Pickle
Trained an intelligent agent that draws bounding boxes around an object in the image.
Extracted features from CNN are fed to DQN to train an agent to localize the object and SVM to categorize it.

STATISTICAL NETWORK ANALYSIS OF WIKIPEDIA GRAPHS — Python, Regex, bs4, gephi, networkx
Creating Networks from data collected by scraping and crawling Wikipedia pages.
Analyzing statistical properties and recognizing patterns in the real-world networks.

CERTIFICATIONS

CONVOLUTIONAL NEURAL NETWORKS — Coursera

NEURAL NETWORKS AND DEEP LEARNING — Coursera