Rishabh Garodia

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Selected Projects

Understanding the relation between shape and learning of Multi Layer Perceptrons (MLPs)   Report | Github
- Examined the effect of changing the widths of layers in a MLPs on its learning and neuron activations

Meme organizer for smartphone gallery   Github
- **Scraped over ~10,000 memes** from open-source domains belonging to multiple templates of memes using **Selenium**
- **Trained a ResNet-50** model to classify memes and non-memes **having 92% prediction accuracy**

Algo trading dashboard   Dashboard
- Designed, developed a system that scraps Indian stock market data from NSE website, runs algorithmic strategies and predicts potential trading signals using Python, streamlit and postgreSQL. Deployed on ec2 instances using cronjob

Multiplayer Card game using Python and OpenCV   Github
- Python implementation using concepts like object-oriented programming, recursion, nested classes, inheritance

Spacer detection and classification
- Created a solution for detecting spacers in drone feeds of high-tension power lines and classifying them as defective or not
- Achieved **98% spacer detection accuracy** using **YoloV3** and **97% defect detection accuracy** using **VGG-16** on a sparse data

Work Experience

Accio.ai (OTH Online Pvt Ltd)   **Mumbai, India**
Team Lead – Computer Vision (Promoted in March 2021)   **Feb 2019 – Aug 2021**
- Led a team in designing, developing and deploying a **cloud solution having 13 custom trained computer vision models** to monetize video content. The solution achieved **conversion rates of 3.6%** on ads suggested by it
- **Reduced the running cost** of the cloud solution by **40%** by optimizing the codes and models using Pytorch
- Designed and implemented a **scalable queue management system** for processes on the EC2 cluster **using python, MongoDB, and Portainer.** Deployed this for 6 months for a client, allowing them to deploy 10 such clusters parallelly
- Finetuned the matching algorithm for the fashion and home decor industry to achieve a **matching accuracy of 85%**
- Achieved a speed of matching **120 Million images** in **0.8 seconds** over a distributed cluster of inexpensive servers
- **Reduced the training time** of CNN models by **30%** by developing an in-house **AutoML pipeline** using Python
- Implemented ANNOY indexing for a recognition solution for **1,250 Indian celebrities** with a **prediction accuracy of 92%**

Bloom8   **Mumbai, India**
Co-Founder   **Nov 2017 – Jan 2019**
- Attempted to **replace international hydroponic nutrients** with locally available alternatives **using in-house empirical data**

ZS Associates   **Pune, India**
Decision Analyst Associate   **May 2016 – Oct 2017**
- Enhanced the physician targeting strategy resulting in **18% increased sales** using XGBoost and PCA on Symphony APLD data
- Defined critical KPIs and metrics to understand the patient referral pattern using **Random-Walk algorithm and Gephi**
- Executed modular ETL pipelines to fetch OMOP data from the ZS Data Lake **reducing project turnaround** times by **20%**
- Performed **analog study** for a new drug on **patient level claims data** using **PostgreSQL** to help the go-to-market strategy
- Working across **5 data sources**, created **a Tableau dashboard** to visualize physicians' referral behaviors across the US

Skills and Interests

- **Programming Languages:** Python, R, Java
- **Machine Learning:** Keras, TensorFlow, PyTorch, Sci-kit Learn, OpenCV, Allegro AI Trains
- **Software Development and Misc:** Linux, Docker, Django, Flask, MySQL, PostgreSQL, MongoDB, AWS EC2, AWS CloudWatch, AWS SageMaker, GCP, Azure, MapReduce, Git, Advanced Excel
- **Certification:**
  - Deep Learning Specialization (Coursera) Credential ID: L8XC3AETQ4EK
  - Deep learning with Python and Pytorch (Edx) Credential ID: cf1790175256416abbdf141ca86b7359
  - Deep learning Fundamentals with Keras (Edx) Credential ID: 809227380ab947a28ff0ee4c01d3f863

Education

University of Massachusetts Amherst   **Amherst, MA**
M.S. in Computer Science | Concentration: Data Science | CGPA: 3.90/4.00   Sept 2021 - May 2023
Relevant Courses: Neural Networks, Systems for Data Science, Mathematical Statistics I

Indian Institute of Technology Roorkee (IIT-R)   **Roorkee, India**
Bachelor of Architecture (B.Arch) | Concentration: Architecture   July 2011 - April 2016
Relevant Courses: Fundamentals of OOP using Java, Mathematics-1, Mathematics-2, Web Design and Development