Harshita Poojary

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EDUCATION

Ramrao Adik Institute of Technology, Mumbai University

Navi Mumbai

Bachelor's Degree in Computer Engineering, GPA: 9.35/10

Jun 2015 - Jul 2019

Relevant coursework: Data Structures & Algorithms, Distributed Databases, Data warehousing & Management, Machine Learning, Artificial Intelligence

WORK EXPERIENCE

Reliance Jio
AI/ML Engineer

Navi Mumbai

Dec 2021 - Present

- Optimized face registration PyTorch models with **TensorRT** using floating point 16 precision to reduce response time by 40%.
- Automated CI/CD pipeline for multiple projects including Video Motion detection, Face registration and Recognition.
- Currently implementing spoof detection.

Product Engineer(Backend)

Jul 2019 - Dec 2021

- Collaborated with multiple teams to integrate 250+ Newspapers, 150+ Live News channels, 800+ Magazines and News in 13 languages across multiple media applications thereby increasing the user base by 50%.
- Enhanced performance of APIs by 20% with the integration of performance management, memory optimization and alert management systems using **Kibana**, **Prometheus** and **Grafana**.
- Increased user engagement by 30% by customizing content as per user preferences, content history and locality, delivering local news, user recommendations and genre-based content.

Tata Consultancy Services

Thane

Intern

Jul 2018 - Dec 2018

- Generated a chat application using PHP, MySQL and a Telegram Bot to connect with peers, add schedules, transfer files, schedule meetings and create polls for discussions.
- Analyzed 3 project management frameworks and created a report detailing the pros/cons of each framework.

ACADEMIC PROJECTS

Innovative Teaching and Learning Interface | J2EE, Javascript, MYSQL

Jun 2018 - Apr 2019

- Developed an interface to plan, execute, evaluate and analyze a lecture based on Bloom's Taxonomy, Norman's 7 stages of action and sentiment analysis.
- Recorded student feedback and generated reports based on which subsequent lectures were stylized.
- Registered the work at the Copyright Office, Department For Promotion of Industry and Internal Trade, India. **Resume Builder** | J2EE, JQuery, MySQL. *Jun 2016 Aug 2016*
- Developed a resume builder that allowed users to input their information and generate a resume using various templates, increasing efficiency by 33%.

PERSONAL PROJECTS

Malaria Detection | Python, PyTorch, Keras

Dec 2021 - Oct 2022

- Developed models using CNN, KNN and Vision Transformers to detect malaria parasites in blood smear images. Trained on a dataset of 27,558 images.
- Performance (F1-score): VGG (96%), CNN (78%), CNN-KNN (58%), Vision Transformer (97%)

Dementia Detection from MRI | Python, PyTorch, Keras

March 2022 - Aug 2022

- Designed a model using SVM and Random Forests to detect Dementia from MRI details. Trained on a dataset from Open Access Series of Imaging Studies (OASIS) comprising 373 data points and 15 features.
- Performance (Accuracy): SVM (88%), Random Forest (96%)

Garbage Classification | Python, PyTorch, Keras

Nov 2021- May 2022

- Implemented and analyzed Deep learning models including CNN, ANN with Transfer Learning to classify garbage along 2,527 different classes trained on the UCI ML dataset.
- Performance (Accuracy): CNN (97%), ANN (95%), Transfer Learning (88%)

Facial Keypoint Detection | Python, PyTorch

Aug 2020- Dec 2020

- Implemented CNN network to build a facial keypoint detection system using set of image data extracted from the YouTube Faces Dataset.
- Successfully added filters to a person's face, using the facial keypoints detected by the trained model.

Sentiment Analysis | Python, AWS, PyTorch

Apr 2020- May 2020

 Created a model based on the LSTM network with XGBoost trained over 2500 IMDB movie reviews and deployed on Sagemaker, achieving an accuracy of 84%

Image Captioning | Python, Pytorch

Nov 2020- Dec 2020

- Created an Encoder-Decoder CNN-RNN and Attention model to generate captions for a given image using the COCO dataset.
- Performance: CNN-RNN (Loss: 1.6645, Perplexity: 5.2828), Attention(Loss: 0.9976).

PUBLICATIONS

- Sumithra T.V, Harshita Dooja Poojary "Comparative Analysis of Deep Learning techniques for Malaria Detection", IEEE (2022).
- Saurabh Bhaskarrao Kshirsagar; Harshita Dooja Poojary; Yuvraj Singh Rana; Avik Jain; Naga Sasank Bonda; Shikhar Saxena "System and Method for Early Detection and Post Disease Detection of Dementia Patients", IEEE (2022).
- Harshita Dooja Poojary, Nachiket Mahesh Shinde, Akash Kumar Singh, Vivek Kothuru, Saurabh Bhaskarrao Kshirsagar, Harsh Agarwal "Classification of Garbage For Robotic System Using Deep Learning Techniques", IEEE (2022).
- Sumithra T.V, Harshita Dooja Poojary, Akshata Dattaram Tatkare, Pranali Mahesh Mugutrao, Manasi Ramesh Pandit "Innovative Teaching and Learning Interface with Evaluation Tool", International Journal of Innovative Research in Computer and Communication Engineering (2019).

SKILLS & INTERESTS

Programming Languages: C, Python, NodeJS, JavaScript, AngularJS, Java, Unix Shell Scripts (Bash), HTML/CSS, SQL.

Operating Systems: Linux, Windows.

Databases: MongoDB, Redis, MySQL, ElasticSearch, Milvus.

Software Applications / **Frameworks** / **Technologies:** Visual Studio, Jira, Azure, AWS, Git, RabbitMQ, Docker, Jenkins, Kubernetes, Express, Nginx, XML, JSON, Agile, Pytorch, Keras, Opency.

LEADERSHIP EXPERIENCE

Computer Society of India

Navi Mumbai

Editor & Event Head

2015 - 2019

- Generated revenue (around 9k INR), organized and administered events "Web Daemon" and "Code Swap" in the annual fest TECHMATE at RAIT.
- Conceptualized and designed editorial sections for the annual newsletter and technical magazine COZINE.

ACHIEVEMENTS & CERTIFICATIONS

- Completed Nanodegree in <u>Computer Vision</u> (Dec 2020), <u>Artificial Intelligence</u> (Sep 2020), <u>Deep Learning</u> (Apr 2020) and <u>Machine Learning</u> (Sep 2018) from Udacity.
- Pursuing specialization in <u>GAN</u> and <u>MLOps</u> Courses from Coursera.
- Received academic excellence award for securing 3rd rank for the academic year 2016-17.