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 **Navi Mumbai**
AI/ML Engineer *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 to prevent false facial verification by using a photo, video.

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, Opencv.

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