Paras Patil

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Education

Vivekanand Education Society's Institute of Technology
Chembur, India

B.E. Computer Engineering
Aug 2019 - May 2023

- Average CGPA (till Sem VII): **9.72** out of 10.
- **Courses:** Artificial Intelligence, Deep Learning, Machine Learning, NLP, Big Data Analytics, Data Structures and Algorithms, Blockchain

Experience

Metacreation Lab for Creative AI, Vancouver, Canada
Advisor: Mr. Renaud Bougueng

UX/UI Designer
Jul 2022 - Oct 2022

- Analyzed existing **Multi-track Audio** Softwares and showcased design prototypes to enhance UX/UI.
- Overhauled the Calliope GUI and developed its web pages using HTML, CSS, JQuery, and MDL Component Library.
- Accomplished work can be found under issue #304 of the Calliope Repository.

Technotreon Intellectual Ventures, Pune, India
Remote

Associate Application Developer
Nov 2021 - Jan 2022

- Achieved 30% reduction in monthly pricing by migrating the Fitolo **Flutter** Application from **Firebase to AWS**.
- Devised and implemented the **database schema** for User and Gym information on **DynamoDB**.
- Set up **Lambda functions** for CRUD operations on DynamoDB tables and deployed the same on the **Serverless** Framework.

VIYN Mobility Pvt. Ltd., Raigad, India
Remote

Lead Application Developer
Jun 2021 - Oct 2021

- Designed and developed the VIYN Mobile App using **Flutter** with Firebase services such as **RTDB, Cloud Firestore, and Authentication**.
- Utilized Firebase RTDB to provide real-time updates between **Arduino Module** and Flutter Application.
- Integrated the application with **GCP** Services such as **Maps and Directions API** to provide a Map-view and Routes.

Projects

Spatiotemporal Forecasting and Optimal Path Navigation using GNN | [CODE]
Mentor: Prof. Nupur Giri

Python, Pytorch, Sklearn, Flutter, Dart

- Generated the DIVE dataset by utilizing the TomTom API to gather traffic speed data from 40 nodes at regular 15-min intervals.
- Conducted a comparative analysis to assess the performance of 4 **GNN** models with time-lags of 15, 30, and 45 mins on three datasets: **PeMSD7, PeMSD8, and DIVE**.
- Developed a **prototype application (Omega Nav)** that provides the **most optimal route** between the 20 selected nodes incorporating future traffic speed patterns predicted by the GNN models.
- Best Model: DCRNN, RMSE values: 5.231, 4.25, 2.59 km/hr for 15, 30, and 45 mins resp.

Customer Review Sentiment Analysis | [CODE]
Mentor: Prof. Vidya Zope

Flutter, Dart, Flask, Python, Tensorflow, Sklearn

- Led a team of 4 in developing a Flutter Application providing the sentiment (Pos/Neg) for any given sentence.
- Implemented **CountVectorizer** to get the n-gram sequences, added **tokenization** layer to **Bi-directional LSTM** and used a pre-trained text embedding with 1M vocabulary size and 50 dimensions for **ANN**.
- Best ML Accuracy: (Multinomial Naive Bayes) 79%, Best DL Accuracy: (Bi-directional LSTM) 85%.

Achievements

- **1st Runner-up** as the leader of a team of 6 at **Smart India Hackathon 2022** (Software Edition) under Student Innovation category with a cash prize of 75,000 INR among 2,00,000+ participants from all over India.
- Selected for grant of 2,00,000 INR under **iHub-Data Mobility Fellowship 2022** as a team of 2.
- **2nd Runner-up** among 50+ participants at CodeCell-VESIT Kaggle Machine Learning Event.
- Conducted a flutter workshop **Application Development with Flutter** for beginners under CodeCell VESIT.
- Volunteered at the **Cleaning Drive** at Dadar Beach conducted on 18th January 2020.

Publications

- *Mittal, V., Patil, P., Upadhyay, A., Madhwani, K., Giri, N. (2023). Classification of ISL Using Pose and Object Detection-Based Techniques.* In: Senjyu, T., So-In, C., Joshi, A. (eds) Smart Trends in Computing and Communications. SmartCom 2023. Lecture Notes in Networks and Systems, vol 650. Springer, Singapore. https://doi.org/10.1007/978-981-99-0838-7_11 [PAPER]

Skills

Programming Python, C/C++, Java, Dart, JavaScript, Flutter, HTML/CSS
Frameworks Tensorflow, Pytorch, Pytorch-Geometric, Scikit-learn, Pandas, Flask, Node.js,
Databases DynamoDB, MongoDB, SQL, Firebase RTDB, Cloud Firestore
Platforms/Tools Heroku, AWS, Firebase, Git, Postman, Figma, Aesprite