Deep Gandhi

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Education

University of Mumbai — Mumbai, IN
B.E Computer Engineering **CGPA: 9.48/10** — Aug 2018 - May 2022

Experience

JPMorgan Chase & Co — Mumbai, IN
Summer Intern — June 2021 - Aug 2021
- Worked with the ACM team in CIB division to automate the SNOW release evidence creation and artifact validation process which reduced the pipeline check time for the SNOW release by 83%

Dwarkadas J. Sanghvi College of Engineering — Mumbai,IN
Undergraduate Research Assistant — Jan 2020 - June 2021
- Worked on detecting brain tumor from scans using Federated Learning for preserving privacy.
- Created a more efficient system using AWD-LSTM to detect Spear Phishing on organizational emails.
- Worked with *Dr.Ramchandra Mangrulkar* and published both chapters in Chapman and Hall books.

Margosatree Technologies — Mumbai, IN
Freelance Python Developer — Jan 2020 - Jan 2021
- Developed a dashboard for Syscon Automation which improved their manufacturing process efficiency by 40%.
- Worked on multiple projects such as clustering Jupyter clients and also quarterly report generators using Selenium.

Levyne — Mumbai, IN
Machine Learning Engineer Intern — Feb 2020 - May 2020
- Built the entire consumer analysis platform based on RFM analytics using Pandas and SciPy.
- Designed a chatbot using nltk and also a recommendation system using fast.ai for their AR-based fashion portal.

Feople Org. — Mumbai, IN
Data Analyst — Jan 2019 - Sept 2019
- Designed a recommendation system and analyzed pricing for a local restaurant using surpriselib, pandas

Projects

A Federated Approach to Hate Speech Detection — *Guide: Zeerak Waseem*
- Learning representations of different types of hate speech for the datasets used in Fortuna et al
- Simulating these representations in a FL environment to check the effect it has on bias

FedHealth — *Guide: Prof. Lynette D'Mello*
- Utilized Federated Learning to train highly sensitive medical models on patient data.
- Creating representations for personalized prescriptions based on user reviews using MedBERT.

Low Resource Language Processing and Opinion Mining — *Guide: Prof. Sudhir Bagul*
- Applying the ULMFiT method to low resource languages and comparing results with modern architectures.
- Currently working on the interpretability of models using Layer Integrated Gradients.

Research & Publications

Application of Deep Learning in Cartography using UNet and Generative Adversarial Network
Design of Intelligent Applications using Machine Learning and Deep Learning Techniques (Chapman & Hall/CRC)

Federated Learning for Brain Tumor Segmentation on Cloud
Chapter 17 of *Cloud Computing Technologies for Smart Agriculture and Healthcare (Chapman & Hall/CRC)*

Fedmoji:A Federated Approach to Predict Emojis in Noisy Hindi Tweets
The 7th Workshop on Noisy User-generated Text (W-NUT), EMNLP 2021, *Submitted*

Detection of Spear Phishing using Natural Language Processing
Chapter 9 of *Cyber Security Threats and Challenges facing Human Life (Chapman & Hall/CRC)*

Music Genre Classification using Transfer Learning on log-based MEL Spectrogram
5^{th} International Conference on Computing Methodologies and Communication (IEEE), *Published*

Leadership & Teaching Experience

- **Teaching Assistant** for an undergrad level Deep Learning Course UMLSC, supported by **Google AI Research**
- Presented various *paper reviews* as a part of the **Unicode Research Group** on Probabilistic Programming.
- Built a predictive model for vehicle component failure for a **Big4 consultancy firm** under *Dr.Kriti Srivasatava.*

Skills

Programming Languages:	Python, R, Javascript, C, C++
Libraries/Frameworks:	PyTorch, fast.ai, Opacus, PySyft, Flower,Flask, FastAPI, Node.js, Express.js
Tools:	Git, Jupyter, Docker, Bash, Heroku, AWS, Azure, LaTeX
Databases:	SQL, MongoDB, Redis, Cloud Databases

Awards

- Awarded Inspire Scholarship, **Top 1%** candidates in Higher Secondary Certificate (12th Grade), 2018
- **Top 3** at *JP Morgan Chase Code for Good 2020* out of 75 teams
- **Top 10** at *HERE Maps' Smart Mobility Hackathon 2019*