

# DEEP GANDHI

✉ [thisisdeepgandhi@gmail.com](mailto:thisisdeepgandhi@gmail.com) 🌐 [deep1401.github.io](https://deep1401.github.io) 🐙 [deep1401](#) 🌐 [deep1401](#)

## EDUCATION

---

**Dwarkadas J. Sanghvi College of Engineering**  
(Mumbai University)  
BE in Computer Engineering

2018 - 2022 (Expected)  
Overall GPA: 9.48/10

## PROFESSIONAL EXPERIENCE

---

**JPMorgan Chase & Co.**

*Summer Intern*

June 2021 - Aug 2021

*Internship*

- Worked with the ACM Team in the Investment Banking division and automated the artifact validation check for every release using Python and pandas.
- Designed a system for automation of evidence store creation for files to be attached to the SNOW ticket reducing the process time from 1.5 hours to 10 mins.

**Dwarkadas J. Sanghvi College of Engineering**

*Undergraduate Research Assistant*

Jan 2021 - June 2021

*Advisor: Dr. Ramchandra Mangrulkar*

- Made a project dealing with the application of Federated Learning for highly sensitive medical data.
- Worked on a research project to identify Spear Phishing using low computational NLP approaches.
- Published 2 chapters for CRC Press in the domains of Federated Learning and Natural Language Processing.

**Margosatree Technologies**

*Freelance Python Developer*

Jan 2020 - Jan 2021

*Part Time*

- Developed dashboard for a Syscon Automation to display dynamic data coming from the manufacturing process and providing useful insights on the same which was later used on a large scale internally within the company
- Worked on a diverse array of client and internal projects like clustering Jupyter clients and dynamic PDF report generation of every quarter using Selenium and Pandas.

**Levyne**

*Machine Learning Engineer*

Feb 2020 - May 2020

*Internship*

- Built the complete data analysis platform using pandas, numpy, scipy for the marketing team which performed RFM analysis on dynamic data.
- Responsible for building a chatbot using NLTK for customer interaction.
- Developed a recommendation system for the platform using fast.ai and PyTorch.

**Feople Org**

*Data Analyst*

Jan 2019 - Sept 2019

*Part Time*

- Acted as the tech lead and was personally responsible for the development of a recommender system and a dynamic pricing strategy of a restaurant client using fast.ai, pandas and surpriselib.

## PROJECTS

---

**A Federated Approach to Hate Speech Detection**

*Guide: Zeerak Talat*

- Ongoing research project which is an extension to the work done by [Fortuna et al](#) to identify representations of overt hate speech data from different datasets using Federated Learning.
- Currently working on extensive analysis of every dataset to mitigate the learned biases in the Federated models.

## FedHealth

Guide: [Prof. Lynette D'Mello](#)

- Final year project which uses Federated Learning to train models on highly sensitive medical data stored on patient devices on a Blockchain network.
- Creating representations for personalized prescriptions based on user reviews using MedBERT.

## A Federated Approach to Predict Emojis in Hindi Tweets

Guide: [Zeerak Talat](#)

- Cost sensitive learning and SMOTE for imbalanced emoji data using FedProx for training.
- Curating a dataset of around 200k tweets to predict emojis for resource constrained languages.

## IndicFed: A Federated Approach for Sentiment Analysis in Indic Languages

Guide: [Prof. Sudhir Bagul](#)

- Training sentiment analysis models for Indic languages using Federated Learning to solve the data scarcity issue.
- Outperforming server-trained counterpart and having a similar performance to models having 10x more parameters.

## RESEARCH & PUBLICATIONS

---

- [1] **Deep Gandhi**, Govind Thakur, Pranit Bari, and Khushali Deulkar, "Application of Deep Learning in Cartography Using UNet and Generative Adversarial Network," in *Design of Intelligent Applications Using Machine Learning and Deep Learning Techniques*, pp. 257–271, Chapman and Hall/CRC, 2021.
- [2] Jash Mehta, **Deep Gandhi**, Govind Thakur, and Pratik Kanani, "Music Genre Classification using Transfer Learning on log-based MEL Spectrogram," in *2021 5th International Conference on Computing Methodologies and Communication (ICCMC)*, pp. 1101–1107, IEEE, 2021.
- [3] **Deep Gandhi**, Jash Mehta, Nemil Shah, and Dr.Ramchandra Mangrulkar, "Federated Learning for Brain Tumor Segmentation on Cloud," in *Cloud Computing Technologies for Smart Agriculture and Healthcare*, ch. 17, Chapman and Hall/CRC, *Accepted*.
- [4] **Deep Gandhi**, Jash Mehta, and Dr.Ramchandra Mangrulkar, "Detection of Spear Phishing using Natural Language Processing," in *Cyber Security Threats and Challenges facing Human Life*, ch. 9, Chapman and Hall/CRC, *Accepted*.
- [5] Swapneel Mehta\*, **Deep Gandhi\***, Jash Mehta\*, and Jay Gala\*, "Towards Estimating the Causal Impact of Non-expert Mentorship on Student Career Outcomes." Under Review at The First International AIXIA Workshop on Causality.

## TECHNICAL STRENGTHS

---

<b>Programming Languages:</b>	Python, R, Javascript, C, C++
<b>Libraries/Frameworks:</b>	PyTorch, fast.ai, Opacus, PySyft, Flower, Flask, FastAPI, Node.js, Express.js
<b>Tools:</b>	Git, Jupyter, Docker, Bash, Heroku, AWS, Azure, L <sup>A</sup> T <sub>E</sub> X
<b>Databases:</b>	SQL, MongoDB, Redis, Cloud Databases

## CO-CURRICULAR ACTIVITIES

---

**Teaching Assistant** for an undergrad level Deep Learning course [UMLSC](#), sponsored by **Google AI Research India**  
Part of **Shalizi–Stats reading group** led by [Swapneel Mehta](#) which focuses on the stats book by [Cosma Shalizi](#)  
Presented various paper reviews as a part of the [Unicode Research Group](#) on topics like Probabilistic Programming  
Built a predictive model for automotive component part failure for a **Big4 consultancy firm** under [Dr.Kriti Srivasatava](#).

## ACHIEVEMENTS

---

Awarded Inspire Scholarship, **Top 1%** candidates in Higher Secondary Certificate (12th Grade), 2018  
**Top 3** at *JPMorgan Chase Code for Good 2020* out of 75 teams  
**Top 10** at *HERE Maps' Smart Mobility Hackathon 2019* out of 64 teams