DEEP GANDHI

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EDUCATION

Dwarkadas J. Sanghvi College of Engineering *2018 - 2022 (Expected)*
(Mumbai University) Overall GPA: 9.38/10
BE in Computer Engineering

Applied Mathematics, Discrete Mathematics, Machine Learning, Data Mining, Database Management, Analysis of Algorithms, Data Structures

PROFESSIONAL EXPERIENCE

JP Morgan Chase & Co. June 2021 - Present
Summer Intern *Internship*

- Working in the Corporate and Investment Banking Team.

Dwarkadas J. Sanghvi College of Engineering Jan 2021 - June 2021
Undergraduate Research Assistant *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 Jan 2020 - Jan 2021
Freelance Python Developer *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 Feb 2020 - May 2020
Machine Learning Engineer *Internship*

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

Feople Org Jan 2019 - Sept 2019
Data Analyst *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 scikit-learn.

PROJECTS

Blockchain-based Federated Learning platform for Private Healthcare Data *Guide: Prof. Lynette D'Mello*

- Using Federated Learning to train models on highly sensitive medical data stored on patient devices on a Blockchain network.
- Using Differential Privacy to increase collaboration of datasets among hospitals and thus, identify diseases in a more accurate way
- Technologies: Python, PyTorch, Flower, Opacus, Jupyter

Survey Analysis of Spanish to English Machine Translation *Guide: Prof. Pranit Bari*

- Conducted ablation analysis for various existing sequential machine translation architecture and compared them to vanilla Transformers on parallel Spanish to English corpus generated during UN Proceedings.
- Implemented various decoding techniques such as Nucleus Sampling and Top-k Sampling from Ari Holtzman et al. in PyTorch
- Technologies: Python, PyTorch, fast.ai, Jupyter

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*, ch. 18, CRC Press (Taylor and Francis), 2021.

[2] **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, CRC Press (Taylor and Francis), Accepted.

[3] **Deep Gandhi***, Jash Mehta*, Naitik Rathod, and Sudhir Bagul, "Low Resource Language Processing and Opinion Mining on Hindi Text," in *The SIGNLL Conference on Computational Natural Language Learning (CoNLL)*, EMNLP 2021, Under Review.

[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*, CRC Press (Taylor and Francis), Accepted.

[5] 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.

TECHNICAL STRENGTHS

Languages	Python, R, Javascript, HTML, CSS, C, C++
Deep Learning & Private AI	PyTorch, fast.ai, Opacus, PySyft, Flower
Machine Learning	Pandas, NumPy, SciPy, scikit-learn, Matplotlib, Bokeh, Seaborn, Altair, NLTK, SpaCy, Streamlit, Dask, ggplot
Web	Flask, FastAPI, Node.js, Express.js, MongoDB, SQL, Redis
Cloud	Heroku, Azure, AWS
Others	Git, Jupyter, Docker, Bash, LaTeX

CO-CURRICULAR ACTIVITIES

Teaching Assistant for an undergrad level Machine Learning Course - UMLSC, Summer 2021.

Part of **Shalizi–Stats reading group** led by Swapneel Mehta which focuses on the book *Advanced Data Analysis from an Elementary Point of View* and Bayesian Statistics taught by Fenil Doshi

Presented various *paper reviews* as a part of the **Unicode Research Group** on the topics of Probabilistic Programming.

Built a predictive model for automotive component part failure for a **Big 4 consultancy firm** under *Dr.Kriti Srivasatava*.

ACHIEVEMENTS

Awarded Inspire Scholarship, **Top 1%** candidates in Higher Secondary Certificate (12th Grade), 2018

Top 3 at JPMC's Code for Good 2020

Top 48 teams in the state for Project Deep Blue 2019.

Top 10 at HERE Maps' Smart Mobility Hackathon 2019