CHAHAK MEHTA

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PROFESSIONAL SUMMARY

Computer Scientist proficient in Machine Learning, Software Development, Data Science, Quantitative Finance, and Scientific Computing looking for full-time engineering roles. Team player with collaboration experience on international teams. Experienced in solving large-scale data problems on High-Performance Computing clusters. Curious about extracting critical insights for data-driven decisions. Active contributor to widely used open-source applications.

PROFESSIONAL EXPERIENCE

Twitter, Inc. - San Francisco, CA
Engineering Intern (Data Science)   *May 2022 – Aug 2022*
- Reduced monthly working timelines by **20%** by creating an internal Looker dashboard to monitor the health of various business metrics and data preprocessing pipeline setup.
- Drove cross-functional team discussion and analysis of different features' importance on ML model performance, and changed the decision by showing a **2% AUROC** metric improvement.
- Increased efficiency of performance monitoring by creating a company-facing Looker dashboard to collate data for different critical metrics for the project.

Housing.com – Gurugram, India
Machine Learning Engineer   *July 2019 – Oct 2020*
- Developed and integrated a Random Forest-based automated price predictor pipeline using Scikit-Learn and H2O in Python for housing properties, with **90%** accuracy.
- Improved and maintained a logo detector deep-learning model and dataset using Python and ResNets to manage the quality of images in terms of motion, blurriness, and super-resolution, on the platform.

EDUCATION

MS, Computational Science, Engineering, and Mathematics   *Expected May 2023*
The University of Texas at Austin, TX, USA *(GPA: 3.97/4.0)*

B.Tech, Hons. Information and Communication Technology, Minor in Computational Science   *May 2019*
Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), Gandhinagar, India *(GPA: 8.68/10)*

OPENSOURCE CONTRIBUTIONS

Matplotlib ([matplotlib.org](#))
- Active contributor at Matplotlib - the most comprehensive visualization library in Python.
- Matplotlib Developer organization and the issue triage team.
- Presenting a tutorial workshop for matplotlib layouts at SciPy Conf 2023.

Maige ([github.com/chahak13/maige](#))
- Authored a Python visualization package based on generative art and the ability to generate random algebraic functions.

Diff-MPM ([github.com/geoelements/diff-mpm](#))
- Core developer of Diff-MPM, a differentiable Material Point Method library.
- GSoC '23 Mentor for diff-mpm under the NumFocus organization's cb-geo sub-project.

SKILLS

Languages: Python, C++, MATLAB, Rust, Shell, SQL, JavaScript, BigQuery, GraphQL, Looker
Libraries and Frameworks: Numpy, Scipy, Scikit-Learn, PyTorch, JAX, Tensorflow, Neo4J, Docker, Kubernetes, Github Actions, Jenkins, Flask, REST APIs

RESEARCH EXPERIENCE

University of Texas at Austin – Austin, TX
Graduate Research Assistant - Dr. Krishna Kumar   *Jan 2023 - Present*
- Developing a differentiable **Material Point Method** (MPM) simulation library in Python using **JAX** to use MPM models in neural networks.
- Built a novel **graph database-based semantic search engine** using Neo4J and Python to create a platform to search for experiments based on the published data generated on Texas Advanced Computing Center (TACC) supercomputers; improving the reach of experiments and reducing duplicated effort in terms of time and resources.

University of Texas at Austin – Austin, TX
Graduate Research Assistant - Dr. Tan Bui-Thanh   *Oct 2020 - May 2022*
- Designed a novel Differential Equations based model to simulate pandemic spread.
- Collaborated with teams from CIMAT and the University of Sonora, on an epidemic simulation project.
- Gave a talk at CILAMCE 2021 and submitted a journal paper to the Journal of Mathematical Biology. ([https://dx.doi.org/10.21203/rs.3.rs-1954140/v1](#), [https://doi.org/10.21203/rs.3.rs-2219155/v1](#))