



NEEL SHAH

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SUMMARY

Self-motivated Data Scientist with proven expertise in planning, applying machine learning, and probabilistic modeling algorithms to solve multifaceted real-world problems. Possess a deep understanding of critical concepts including machine learning, deep learning, reinforcement learning, computer vision, NLP, and inference systems. **Skilled at leveraging GPUs and supercomputer clusters** to execute complex experiments and implement innovative solutions. Published author with AI-based healthcare research paper in a renowned Scopus-indexed journal. Currently engaged in two active research projects focused on advancing the state-of-the-art in AI.

WORK EXPERIENCE

AI Developer, Charusat Learning And Development Club (CLDC)

May 2023 - June 2023

- As part of a team, I was responsible for developing a deep learning-based **botnet detection** model, capable of identifying and mitigating malicious botnet activities. Additionally, I contributed to the implementation of an **emotion detection** model using deep learning techniques, which was trained on both video and audio data to accurately recognize and classify human emotions.

SKILLS

Python ★★★★★
Java ★★★★★
Deep Learning ★★★★★
Machine Learning ★★★★★
Data Analytics ★★★★★
Computer Vision ★★★★★

Java Script ★★★★★
Oracle SQL ★★★★★
Mongo DB ★★★★★
R Programming ★★★★★
Linux ★★★★★
MERN Stack ★★★★★

PACKAGES

Tensorflow, Keras, Scikit-Learn, Numpy, Pandas, Matplotlib, Open CV, Streamlit, Numba, Jupyter Notebook, Seaborn, Tmux, NodeJs, ReactJs, Collection Framework, docker, wandb (Weights and Biases).

VERSION CONTROL

Git, Github

EDUCATION

Bachelor of Artificial Intelligence And Machine Learning

Sep. 2022 - Oct. 2026

Charotar University of Science and Technology

- CGPA - 9.54
- Industry Certifications
 - IIT Kharagpur** - Data Structure and Algorithms Using Java.
 - DeepLearning.AI** - TensorFlow Developer, Machine Learning specialization, Deep Learning, Generative AI with Large Language Models, Convolutional Neural Networks.
 - NVIDIA** - Fundamentals of Accelerated Computing with CUDA Python.
 - Oracle** - Oracle Certified Professional, Java SE 6 Programmer.
 - RedHat** - Fundamentals of Redhat Enterprise Linux 9.
 - Samatrix.io** - Data Analysis using Python, Foundation of Data Analysis and Data Analytics
- Course Work
 - Database Management Systems, Data Structure and Algorithms, Design and Analysis of Algorithms, Operating Systems, Artificial Intelligence, R programming.

Higher Secondary School

Mar. 2020 - Mar. 2022

Smt. Parvatiben Bhalchandra Dhirubhai Joshi Higher Secondary School

- 87.96 PR

Primary and Secondary School

Mar. 2019 - Mar. 2020

Smt. Parvatiben Bhalchandra Dhirubhai Joshi High School

- 92.98 PR

PROJECTS

- Democratic Net – Defending Against Misinformation
 - Developed a platform leveraging deep learning models like **Bi-LSTM, BERT, and Roberta (72.3% top-3 accuracy)** to combat misinformation and fake news threatening democratic institutions. **Curated proprietary dataset** to train the models for efficiently analyzing and counteracting false narratives aimed at destabilizing nations.
- Veterinary Bacteria Classification
 - Rapid bacterial species identification is crucial across domains. Traditional lab methods relying on biochemical/molecular biology techniques are costly, time-consuming, and require expert knowledge due to complex sample preparation.
 - **Finetuned** a bacterial identification model experimenting with various deep learning architectures including **VGG16, DenseNet, XceptionNet, EfficientNet**, and others. The model achieved a remarkable **98.6% top-1 accuracy** in classifying 24 bacterial species from non-microscopic(traditional way) images.
- Brain - TV
 - Developed an **AI neuroscience application**, involved developing an **Encoder-Decoder architecture** using deep learning architectures like **ViT (Vision Transformer)** and **diffusion model** to visualize images based on human thoughts captured through fMRI signals. The project comprised two key parts: masked brain modeling and latent diffusion model conditioning by **fMRI latent data**.

PUBLICATION

- Future of large language models and digital twins in precision healthcare: A symmetric literature review - Tuijin Jishu/Journal of Propulsion Technology

ACHIEVEMENTS & EVENT PARTICIPATION

- Achieved the distinction of being among the **top 11 teams** selected from across India to participate in the prestigious International **OpenACC Nvidia Hackathon**, hosted at the esteemed **Indian Institute of Science (IISc), Bangalore**.
- Presented a paper at the **International Conference on Recent Trends and Science Technology (ICRTST) 2023**.
- Participated in the **Smart India Hackathon 2023**, a nationwide initiative promoting innovation and problem-solving skills among students.
- Earned the honor of representing my department at the university-level **Student Startup and Innovation Policy (SSIP) Competition**, after being shortlisted for this esteemed event.
- Participated in the **Accenture Innovation Challenge 2023**, a platform that fosters creative thinking and innovative solutions to real-world problems.
- **Coordinated** the **AI FOR ALL MEET-UP** at Charusat University, an interdepartmental event aimed at **promoting collaborative research projects** and fostering a culture of innovation in the field of Artificial Intelligence.
- Served as a **resource person** for a two-day event organized by the **Computer Society of India** and **IEEE**, where I conducted sessions on web development using ReactJS, sharing my expertise and knowledge with attendees.

REFERENCES

- Dr. Nirav Bhatt - Head of the Department of Artificial Intelligence and Machine Learning, **CHARUSAT University**
 - Email - hod.aiml@charusat.edu.in
- Mr. Gunjan Shah - Senior Technical Lead at **HCL Technologies Limited**
 - Email - shahgunjan07@gmail.com

LANGUAGES

English, Hindi, Gujarati (Native), German (Beginner, currently learning).

PROFILE LINKS

- Linked In - <https://www.linkedin.com/in/neeldevenshah/>
- Github - <https://github.com/NeelDevenShah>
- Leetcode - <https://leetcode.com/neeldevenshah/>