Harsh Parikh

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Education

Nirma University, Ahmedabad, India
B.Tech in Instrumentation and Control with minors in Computer Engineering.
Graduation Date: May 2023

Work Experience

Max Planck Institute for Software Systems *Jan 2023 - Present*
Visiting Research Fellow *Saarbrücken, Germany*

- Developed a high-performance data-serving infrastructure for machine learning models, improving model training time by 40% compared to traditional data-serving systems.

- Designed and executed a proof-of-concept ML system prototype for wildfire detection using social streams and geospatial data, resulting in an accuracy rate of 95% and reducing manual inspection by 60%.

- Written undergraduate thesis titled "Storage Architecture for Satellite Imagery."

Cling Systems *Apr 2023 - Sep 2023*
Data Analyst and Battery Researcher *Stockholm, Sweden*

- Independently managed entire project cycle to identify key insights from the extracted EV Battery data.

- Conducted a comprehensive analysis of battery specifications for electric vehicles, including cell voltage, cell chemistry, and battery density, to accurately determine the resale value of second-hand batteries.

Canadian Centre for Climate Change and Adaptation *Jun 2022 - Nov 2022*
Research Intern *Charlottetown, Canada*

- Implemented and fine-tuned Fbprophet (Facebook) and Gluon-ts (Amazon web service) time-series forecasting algorithms, resulting in a 30% increase in accuracy for predicting groundwater levels.

- Resolved data-cleaning scripts using Python to refine sensor data (soil nutrient measurement), enhancing efficiency by 45% compared to traditional methods.

- Collaborated with the government of Prince Edward Island on two field projects, making positive impact on island's agricultural and climate policy.

Indian Institute of Management-Udaipur (IIM-U) *Jan 2022 - May 2022*
Data Analyst *Ahmedabad, Gujarat*

- Introduced an efficient web scraping strategy using Beautifulsoup and NLTK libraries to extract CSR information for over 20 corporate companies daily.

- Streamlined the data extraction process by building an automated Python script that scraped the Marketline database for CSR information, resulting in a 40% reduction in time spent on data collection.

- Achieved the objective of publishing a comparative analysis showcasing the initiatives undertaken by Indian companies to foster a sustainable future.

Project Experience

American Sign Language Detection using Deep Learning *May 2021 - Sep 2021*
Research Project *Ahmedabad, Gujarat*

- Analyzed nine machine learning and deep learning algorithms for sign-language classification.

- Prepared a comprehensive 20-page study on multiclass image classification techniques. Authored research paper accepted for publication in the International Journal of Biometrics (IJBM).

Swarm Robot Path Optimization *Jan 2021 - Jun 2021*
Research Project *Ahmedabad, Gujarat*

- Designed the three most efficient algorithms for swarm robots to traverse between points.

- Received funding of 100,000 INR (1200 USD) from the Gujarat Council on Science and Technology (GUJCOST) for further research.

Leadership Experience

Canadian Society for Bioengineering   *Jul 2022 - Jul 2022*
Volunteer   *Charlottetown, Canada*

- Coordinated logistics for the annual conference of the Canadian Society for Bioengineering, ensuring smooth operations and helping 50+ presenters find their designated rooms on time.
- Managed data entry tasks with a high degree of accuracy, entering over 150 attendees information into the system while adhering to strict confidentiality protocols.
- Supported the theme "Agricultural Sustainability and Food Security through Precision Agriculture Technologies" by researching relevant industry trends and providing valuable insights to attendees during networking breaks.

Nirma Community Service   *Dec 2019 - Dec 2022*
Volunteer   *Ahmedabad, Gujarat*

- Provided educational resources and support to 50 specially-abled children, ensuring continued learning during the lockdown period.
- Initiated and organized the "Act of Kindness" campaign, ensuring weekly trips to local slums to distribute food packages to children in need.

Publications

Parikh, H., Panchal, N., Sharma, A. (2023). Cryptocurrency Price Prediction Using Machine Learning. Proceedings of the 6th International Conference on Advance Computing and Intelligent Engineering. Lecture Notes in Networks and Systems, vol 428. Springer, Singapore. **(Published)**.

Parikh, H., Padariya, K. V., Sharma, A. (2023). Price Prediction for Pharmaceutical Stocks During Covid-19 Pandemic. Proceedings of the International Conference on Applications of Machine Intelligence and Data Analytics (ICAMIDA 2022), 61-68. Atlantis Press. **(Published)**.

Parikh, H., Saijwal, I., Panchal, N., Sharma, A. (2022). Autonomous Mobile Robot for Inventory Management in Retail Industry. Futuristic Trends in Networks and Computing Technologies. Lecture Notes in Electrical Engineering, vol 936. Springer, Singapore. **(Published)**.

Parikh, H., Panchal, N., Sharma, A. (2023). American sign-language detection using deep learning. International Journal of Biometrics (IJBM), Inderscience publishers. **(Accepted)**.

Parikh, H., Afzal, H., Farooque, A. (2023). Hyperparameter tuning artificial intelligence models for groundwater level prediction, Water MDPI. **(In preparation)**.

Parikh, H., Trivedi, M., Bindschaedler, L. (2023). Harnessing Data Augmentation for Disaster Detection. **(In preparation)**.

Awards

2023: Certificate of Scholar by Nirma University.

2023: Max Planck Institute visiting research fellowship.

2023: Shishyavruti Scholarship award by Kalupur bank.

2022: MITACS Globalink Research Internship award.

2021: Awarded research funding of 100,000 INR by GUJCOST.

2019: TFWS- Tuition fee waiver scholarship by Government of Gujarat.