

Neel Shah

AI ENGINEER · AZURE DATA SCIENTIST ASSOCIATE

Gujarat, India. (Willing to Relocate)

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Summary

Innovative AI Engineer with expertise in machine learning, deep learning, computer vision, and NLP. Proven ability in fine-tuning open-source models for domain-specific applications, delivering impactful business value. Actively advancing knowledge in reinforcement learning (RL), working on cutting-edge AI research. **3x Hackathon Winner**, with notable achievements in the NVIDIA OpenACC International Hackathon, Amazon ML Challenge, and Meesho Visual Taxonomy Data Challenge 2024. Acknowledged for skills in **data engineering, MLOps**, and recommendation systems, adept at **streamlining end-to-end machine learning workflows** from experimentation to production. Microsoft Azure Certified Data Science Associate, **leveraging cloud technologies for scalable AI solutions**. Committed to applying AI and data engineering expertise to drive innovation and efficiency across industries.

Work Experience

Aviato Consulting

Australia (Remote)

AI ENGINEER

May. 2024 - Jun. 2024

- Engineered AI-driven solutions for virtual fashion try-ons and B2B customer interactions using **deep learning, multi-agent systems, recommendation engines, and Neo4j on Google Cloud Platform (GCP)**.
- Developed personalized and interactive experiences by implementing multi-agent systems and sophisticated recommendation engines, enhancing user engagement and satisfaction.
- Integrated AI innovations into real-world applications for **Australian clients**, demonstrating the potential of AI to revolutionize various sectors and elevate user experiences.
- Empowered consumers with informed fashion choices and businesses with deeper customer insights, driving significant advancements in fashion retail and customer relationship management.
- Contributed to projects that **received outstanding client feedback and achieved remarkable business outcomes**, showcasing the tangible benefits of AI.

Charusat Learning And Development Club (CLDC)

Gujarat, India

AI DEVELOPER

May 2023 - Jun. 2023

- Spearheaded the development of a deep learning-based **botnet detection model using TensorFlow, Keras, and Python, enhancing cybersecurity** by identifying and neutralizing malicious botnet activities.
- Played a pivotal role in creating an advanced **emotion detection model**, utilizing deep learning techniques to accurately recognize and classify human emotions from video and audio data.
- Utilized **agile methodologies, robust problem-solving, and effective communication** to drive project success.
- Leveraged AI to deliver impactful solutions, showcasing technical expertise and a passion for continuous learning and excellence in the field.

Skills

Data Science and Machine Learning

Machine Learning, Deep Learning, Reinforcement Learning, MLOps, Computer Vision

Web Development

MERN Stack (MongoDB, Express.js, React.js, Node.js), Fast API, Flask

Programming Languages

Python, Java, JavaScript, SQL, R Programming, Cypher, GraphQL

Cloud Platforms

Microsoft Azure, Google Cloud Service (GCP), Databricks

Business Intelligence (BI) Tools

Power BI

Frameworks and Libraries

Pytorch, Tensorflow, Keras, Scikit-Learn, Numpy, Pandas, Matplotlib, OpenCV, Seaborn, Numba, Jax

Databases

Oracle SQL, MongoDB, Neo4j, Neo4j Graph Data Science (GDS)

MLOps Tools

Git, GitHub, Docker, Apache Airflow, WandB, Astro, MLflow, DVC, Apache Spark(Beginner)

Operating Systems

Linux, Windows

Languages

English, Hindi, German (Beginner), Gujarati

Education

Charotar University of Science and Technology (CHARUSAT)

Gujarat, India

BACHELOR OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Sep. 2022 - Apr. 2025 (Expected)

- CGPA: 9.6
- Course Work: Database Management Systems, Data Structure and Algorithms, Design and Analysis of Algorithms, Operating Systems, Artificial Intelligence, R programming, Power BI, Tableau

Smt. Parvatiben Bhalchandra Dhirubhai Joshi Higher Secondary School

Gujarat, India

PRIMARY, SECONDARY, AND HIGHER SECONDARY (SCIENCE)

2022

- 10th Grade: 92.98th Percentile
- 12th Grade: 87.96th Percentile

Achievements

- Won **1st place and a 70,000 INR prize** in a competition organized by the **Adani Institute of Digital Technology Management**, sponsored by **MSBC Group**.
- Secured **3rd position** and won **80,000 INR** among 180 top-tier teams in The Maverick Effect AI Challenge 2024, supported by **NASSCOM** and other prestigious organizations.
- Clinched **2nd place** in the **IndoML Datathon 2024 (Phase 1)**, sponsored by **Nieleniq**, competing against **350+ teams** from all over India. Our team showcased innovative solutions in machine learning, winning **INR 4000**.
- Secured **8th place (Top 2%)** in the **IndoML Datathon 2024 (Phase 2)**, sponsored by **Nieleniq**, competing against **350+ teams** from across India. Our team demonstrated advanced machine learning techniques to solve complex data challenges, earning recognition in this highly competitive event, and winning **INR 3000**. Additionally, we were invited to **BITS Pilani** with a generous travel grant to attend **IndoML 2024** in person.
- Secured **64th place (Top 0.1%)** out of **20,000+ teams** in the **Amazon ML Challenge 2024**, utilizing **400+ GPU hours** over three days to refine the solution.
- Selected as a finalist in the **AI Hackathon 2024**, hosted at the esteemed Indian Institute of Management (IIM), Ahmedabad, demonstrating innovative AI solutions among top-tier developers.
- Secured **23rd rank (Top 11%)** out of **196 teams** in the prestigious **Meesho Visual Taxonomy Data Challenge CODS COMAD**, developing a machine learning model to predict product attributes from images.
- Led a team that secured **2nd position** at the University level in the **Smart India Hackathon 2023**, a nationwide innovation and problem-solving initiative.
- Achieved the distinction of being among the **top 11 teams** selected from across India to participate in the prestigious **OpenACC Nvidia Hackathon**, hosted at IISc, Bangalore.
- Achieved **Top 5% nationwide** performance in the Database Management System course by IIT Kharagpur via NPTEL.

Industry Certifications

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|------------------------------|---|
| Stanford University | Machine Learning specialization |
| IIT Kharagpur (NPTEL) | Data Structure and Algorithms Using Java, Data Base Management System, Machine Learning |
| IIT Ropar (NPTEL) | Deep Learning |
| IIT Madras (NPTEL) | Reinforcement Learning |
| DeepLearning.AI | TensorFlow Developer, Deep Learning, Generative AI with Large Language Models, Convolutional Neural Networks. |
| Nvidia | Fundamentals of Accelerated Computing with CUDA Python |
| Microsoft | Certified Azure Data Scientist Associate, Data Science with Azure Databricks |
| Oracle | Oracle Certified Professional, Java SE 6 Programmer |
| RedHat | Fundamentals of Redhat Enterprise Linux 9 |
| Neo4j Graph Academy | Neo4j Graph Data Science Certification, Neo4j Data Modelling Fundamentals, Neo4j & LLM Fundamentals |
| Samatrix | Data Analysis using Python, Foundation of Data Analysis and Data Analytics |

Notable Projects

DigiManuf: AI-Powered Digital Twin Ecosystem

[GitHub: Link](#)

- Developed **DigiManuf**, an AI-powered Digital Twin Ecosystem for real-time monitoring, **predictive maintenance**, and anomaly detection in manufacturing.
- Implemented **Digital Twin Technology** with interactive 3D visualizations, synchronized with real-time IoT data for efficient management.
- Integrated **AI-driven predictive maintenance** and simulation capabilities to optimize decision-making in distributed manufacturing environments.

MediPriority: AI-Driven Healthcare Management System

[GitHub: Link](#)

- Developed **MediPriority**, an AI-driven healthcare management system to streamline patient care from **pre-consultation to post-consultation**.
- Implemented **multi-agent AI systems**, including text and video analysis agents, urgency scoring, and personalized health recommendations.
- Integrated **dynamic urgency scoring**, **AI avatars for post-consultation support**, and **Google Calendar synchronization** for seamless patient management.

AI Avatar Maker App

[GitHub: Link](#)

- Developed a **Flutter-based application** to generate realistic human avatars using advanced AI models and user inputs.
- Implemented **cloud-driven architecture** for fast, on-demand avatar generation with a user-friendly interface.
- Enabled **on-click avatar creation**, ensuring seamless and efficient user experiences.

Publications

Machine Learning–Enabled Digital Twins for Diagnostic and Therapeutic Purposes

NEEL SHAH, JAYANSH NAGAR, KESHA DESAI, NIRAV BHATT, NIKITA BHATT, HIREN MEWADA

AI-Enabled Blockchain Technology
and Digital Twin for Smart Hospitals

Oct. 2024

The Future of Manufacturing with AI and Data Analytics

NEEL SHAH, SNEH SHAH, JANVI BHANUSHALI, NIRAV BHATT, NIKITA BHATT, HIREN MEWADA

AI-Enabled Digital Twin for Smart
Manufacturing

Oct. 2024

Future of Large Language Models and Digital Twins in Precision Healthcare: A Symmetric Literature Review

NEEL SHAH, NIRAV BHATT, NIKITA BHATT

Journal of Propulsion Technology

Dec. 2023

Extracurricular Activity

Board of Studies, Artificial Intelligence and Machine Learning

STUDENT REPRESENTATIVE

- Acted as a key liaison between students and faculty, representing student interests in curriculum discussions and decision-making processes.
- Provided valuable input on course content, program structure, and academic policies to ensure the relevance and quality of the AI and ML curriculum.

Faculty of Technology, Charusat
University

2023 - 2025

AI For All Meet-Up 1.0 & 2.0

COORDINATOR

- Played a pivotal role in the successful coordination of the "AI FOR ALL MEET-UP."
- Facilitated collaboration and discussions between AI experts and professionals from various other fields.
- Created an inclusive environment for knowledge sharing, making AI technologies accessible and relevant to all participants.

Dept. of AIML, Charusat University

Sep. 2023 & Sep. 2024

Web Development using React.js

RESOURCE PERSON

- Facilitated engaging learning sessions on React.js, Node.js, MongoDB, and Express.js for a group of enthusiastic participants.
- Delivered comprehensive hands-on training to help individuals master key aspects of full-stack web development.

Computer Society of India & IEEE

Sep. 2022

References

Dr. Nirav Bhatt

HEAD OF THE DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING AT CHARUSAT UNIVERSITY

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