

Nikhil Kumar Singh

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SUMMARY

Enthusiastic student specializing in Machine Learning and AI, adept at applying theoretical knowledge in practical contexts. Skilled in Python with hands-on experience in implementing machine learning algorithms. Strong foundation in mathematics and statistics. Actively seeks innovative solutions to advance AI capabilities, stays updated on the latest advancements, and is dedicated to making a positive impact through AI applications.

EDUCATION

B.Tech Computer Science and Artificial Intelligence Engineering	Sept. 2021 – Present
<i>Amrita Vishwa Vidyapeetham, Amritapuri, Kerala</i>	
12th Grade	Jul. 2017 – Apr. 2019
<i>Pentagon International College, Kathmandu, Nepal</i>	
10th Grade	Apr. 2015 – Apr. 2017
<i>Shree Maisthan Vidyapeeth MA VI, Birgunj, Nepal</i>	

INTERNSHIP

ACM-ASC Internship — ACM Amrita	Jan. 2024 – Present
<ul style="list-style-type: none">Worked on a research paper focusing on the application of artificial intelligence in addressing disabilities, particularly in the context of autism spectrum disorder (ASD).Conducted literature review to analyze current AI-based solutions for ASD communication.Started development on an application using Flutter framework to create a user-friendly communication tool for individuals with autism.	

PROJECTS

OutsmartDetect: AI Content Evasion System	May 2024 – Present
<ul style="list-style-type: none">Developing OutsmartDetect, an AI system designed to evade detection by fine-tuning a large language model (LLM) using Reinforcement Learning from Human Feedback (RLHF).Utilized another LLM to generate content based on provided prompts. The generated content was evaluated by an AI detection system, and the feedback was used to compute rewards.Fine-tuned the LLM with this feedback to produce responses that are less detectable, thereby enhancing the LLM's ability to generate more human-like content.Aimed at improving the generation of natural and undetectable AI-generated content.	
Auto Park: Intelligent Parking System	Mar. 2024 – Jun. 2024
<ul style="list-style-type: none">Developed Auto Park, an advanced reinforcement learning-based self-parking tool, to enhance my skills in reinforcement learning.Implemented and fine-tuned reinforcement learning algorithms to improve problem-solving abilities and gain insights into creating efficient solutions for autonomous parking systems.	
Restaurant Marketplace: Django-Based Food Ordering Platform	Oct. 2022 – Jan. 2023
<ul style="list-style-type: none">Developed Restaurant Marketplace, a Django-based platform allowing restaurants to register and customers to order food.Implemented user authentication, restaurant registration, and order management functionalities to create an integrated marketplace.Addressed challenges in user and restaurant interactions, resulting in a robust and scalable solution.	
PneumoVision: Innovative Pneumonia Detection Model	Aug. 2022 – Oct. 2022
<ul style="list-style-type: none">Addressed inefficiencies and inaccuracies in existing pneumonia detection methods, leading to delays in medical intervention.Improved the accuracy and efficiency of pneumonia detection, facilitating timely and effective medical interventions and potentially saving lives.	

SKILLS

Languages: Java, Python, JavaScript

Machine Learning: Deep Learning, Computer Vision, Natural Language Processing, LLMs, MLOps

Frameworks: TensorFlow, PyTorch, Scikit-learn, React, Node.js

Web Development: HTML, CSS, React, Node.js

Database: SQL, PostgreSQL, MongoDB

Cloud Platforms: AWS, Azure, Google Cloud Platform

Tools and Technologies: Git, GitHub, Docker, Kubernetes, CI/CD

Networking: TCP/IP, HTTP/HTTPS, RESTful APIs, WebSockets

Operating Systems: Linux, Windows

Data Visualization: Matplotlib, Seaborn, Plotly

COURSES

Developing Large Language Models, DataCamp

Feb. 2024 – Jun. 2024

[Certificate Link](#)

- Gained a comprehensive understanding of Large Language Models (LLMs), including their architecture and functionality.
- Learned techniques for developing and fine-tuning state-of-the-art language models using Python and PyTorch.
- Applied LLMs to real-world Natural Language Processing (NLP) tasks through hands-on projects and practical exercises.

Generative AI with Large Language Models, Coursera

Sept. 2023 – Nov. 2023

[Certificate Link](#)

- Explored the fundamentals of Generative AI, focusing on the latest advancements in Large Language Models (LLMs).
- Studied advanced techniques for the generation of AI content, including training methodologies and model evaluation.
- Applied theoretical knowledge to practical scenarios, enhancing skills in building and deploying LLMs.

Machine Learning A-Z™: AI, Python & R + ChatGPT Bonus [2023], Udemy

Dec. 2022 – Apr. 2023

[Certificate Link](#)

- Completed extensive training in Machine Learning with practical applications using Python and R.
- Studied a wide range of machine learning algorithms, including supervised and unsupervised learning techniques.
- Received additional content on ChatGPT, covering its architecture, fine-tuning, and practical use cases.

ACHIEVEMENTS

Amrita Chancellor Scholarship

Sept. 2021 – Jul. 2025

Amrita Vishwa Vidyapeetham

- Awarded for academic excellence in B.Tech in Computer Science and Artificial Intelligence Engineering.
- Recognizes outstanding performance and provides significant financial support throughout the course.

Mahatma Gandhi Scholarship

Apr. 2017 – Apr. 2019

The Embassy of India, Kathmandu

- Provided monthly aid of INR 2000 for two years during +2 studies by the Indian Embassy in Kathmandu.
- Awarded for academic merit and financial need, supporting educational expenses during secondary education.

COMMUNITY OUTREACH

Travel-Sathi: A Travel Guide for Tourists

Sept. 2023 – Nov. 2023

Amrita University Student Social Responsibility Program

- Developed a comprehensive travel guide app called Travel-Sathi to enhance tourist experiences.
- Conducted extensive surveys and community outreach to gather valuable insights and improve app features.
- Built a user-friendly web app to provide essential travel information and personalized recommendations.
- Aimed to assist tourists in exploring new destinations seamlessly.