Nidarsh Nithyananda

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Summary

Experienced software engineer with expertise in full-stack development, machine learning, and deep learning. Delivering innovative solutions, enhancing efficiency, and contributing to impactful research, coupled with a strong commitment to volunteering and community engagement.

Skills

Programming Languages:	Python, Java, C++, SQL, Javascript
Machine Learning:	Numpy, Pandas, Scikit-Learn, Keras, Tensorflow, Pytorch, Matplotlib, Tableau
Artificial Intelligence:	Generative AI (GenAI), Large Language Modelling (LLM)
Web Development:	HTML, CSS, Tailwind CSS, Node JS, Spring Boot, React, Next.js, Flask
Database Systems:	MongoDB, MySQL, Oracle 11g, PostgreSQL
Cloud Technology Services:	AWS (IAM, EC2, Lambda, RDS, SES, SNS)

Education

University of Alabama at Birmingham — Birmingham, Alabama
Master of Science in Computer Science *GPA: 3.7/4.0* — Aug 2022 - Aug 2024

Relevant Coursework: Machine Learning, Natural Language Processing, Advance Algorithms, Database Systems, Advance Object Oriented Programming with C++, Matrix Algorithms for Data Science, Deep Learning, Cloud Computing

Sahyadri College of Engineering and Management — Mangaluru, India
Bachelor of Engineering in Computer Science and Engineering *GPA: 7.32/10.0* — Aug 2015 - May 2019

Relevant Coursework: Data Structures and Applications, Unix and Shell Programming, Software Engineering, Design and Analysis of Algorithms, Database Management Systems, Artificial Intelligence, Computer Graphics and Visualization, Big Data Analytics

Professional Work Experience

Tech Mahindra — Pune, India
Software Engineer — Dec 2021 - Jun 2022

- Developed and implemented a robust microservices architecture and scalable API's, reducing security vulnerabilities by 30% and ensuring compliance with OWASP guidelines.
- Collaborated with cross-functional teams to design and deliver components for the online ordering system, reducing customer checkout time by 20%.
- Contributed to Kubernetes migration, performing regular builds and system tests to ensure seamless integration and continuous delivery with Jenkins.

IBM — Bengaluru, India
Application Programmer - Java Full Stack — Aug 2019 - Dec 2020

- Developed JSP, React, and Spring Boot components, improving system response time by 20% for an e-commerce client, enhancing performance and user experience.
- Automated log fetching and root cause analysis using Python, saving 35 hours of manual work weekly, enabling faster issue resolution within a containerized environment.
- Collaborated with testing and infrastructure teams to streamline the Agile development process, reducing time to market for new features by 10% through improved CI/CD practices.

Certifications

AWS Certified Cloud Practitioner, AWS, Amazon	May 2023 - May 2026
Generative AI Fundamentals, Google Cloud Skills Boost, Google	Jun 2023
Deep Learning Specialization, DeepLearning.ai and Coursera	Apr 2020
Advanced Data Science with IBM, IBM and Coursera	Sep 2019

Publications

Exploring the Performance of EEG Signal Classifiers for Alcoholism — Aug 2020
Advances in Artificial Intelligence and Data Engineering, Advances in Intelligent Systems and Computing, vol 1133. Springer, Singapore.

Volunteering

Sahyadri Open Source Community (SOSC) — Oct 2018 - Jan 2019
Mentored budding developers during Hactober Fest 2018 and Cognit'19 2019 at Sahyadri College of Engineering and Management, Mangaluru.

Other Work Experience

Thaniya Technologies
Mangaluru, India
Software Engineer - Freelance
Jul 2022 - Present

- Developed a Python-based role-playing game (RPG) tailored to the client's requirements, achieving a 95% customer satisfaction rate.
- Demonstrated commitment to client success by providing sustained support post-deployment, ensuring a seamless transition and facilitating a deeper understanding of the implemented solution.
- Employed agile development methodologies, reducing project development time by 15% and increasing overall project efficiency.

Sahyadri College of Engineering & Management
Mangaluru, India
Research Assistant
Aug 2018 - May 2019

- Researched and evaluated various supervised classifiers to analyze EEG signals and accurately differentiate between alcoholic and non-alcoholic subjects, resulting in a classification accuracy of 92%.
- Streamlined data cleaning and feature engineering procedures through the implementation of Python scripts, resulting in a 70% reduction in manual effort and an estimated monthly time savings of 100 hours.
- Presented research findings at AIDE-19 conference, resulting in the publication of the paper in Advances in Intelligent Systems and Computing (AISC, volume 1133), Springer, Singapore.

Projects

SimplyShare - Cloud based file sharing
Skills: *Python, Flask, HTML, CSS, JS, AWS (EC2, Lambda, SES, RDS)*

Engineered a user-friendly interface that allows users of all technical levels to effortlessly upload, download, and share files with customizable access controls.

- Implemented scalable storage solutions using AWS S3 and AWS RDS, enabling flexible storage options that adapt to the needs of solo users and large enterprises.
- Integrated AWS SES for secure email notifications, ensuring real-time updates for shared files and collaborative activities.
- Deployed the application on AWS EC2, ensuring high availability and robust performance across various devices

Extractive and Abstractive Summarization on BBC News Corpus
Skills: *Python, Pytorch, NLTK, Hugging Face, Git*

To study the performance of the extractive, abstractive and its ensemble summarization on the BBC News Corpus.

- Conducted comprehensive exploratory data analysis (EDA) on the BBC News Corpus, identifying key patterns and trends that informed subsequent feature engineering decisions.
- Implemented an ensemble pipeline for the execution flow, increasing the overall efficiency of the machine learning process by 10%.
- Analysed the performance of T5, PageRank, BERT pre-trained large language models after retraining on the BBC News Corpus.

Exploring the Performance of EEG Signal Classifiers for Alcoholism
Skills: *Python, Scikit, Pandas, Flask, Git*

To evaluate the performance of supervised classifiers by analyzing their ability to differentiate between the brain signals of alcoholic and non-alcoholic subjects.

- Programmed machine learning algorithms to improve data accuracy and efficiency, resulting in a 60% increase in predictive modeling performance.
- Executed Race Algorithm to study the performance of supervised learning classifiers such as Support Vector Machine, K-Nearest Neighbors, Naive Bayes and Artificial Neural Networks.

Efficient Data Stream Anomaly Detection
Skills: *Python, Scikit-learn, Matplotlib, Streamlit, Git*

Accomplished real-time anomaly detection in a continuous data stream by developing a custom Python application that simulated real-world metrics like financial transactions.

- Increased detection accuracy by implementing Z-score, EWMA, and Isolation Forest models, optimizing for performance and speed.
- Built an interactive dashboard using Streamlit to visualize the data stream and detected anomalies, improving anomaly detection clarity by 15%.
- Reduced latency in anomaly detection by 10% through optimization techniques like a sliding window mechanism and efficient data stream processing.