Neha Kolambe

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Education

University of Colorado, Boulder   *August 2024 – May 2026*
MS in Computer Science

- GPA: 4.0/4.0
- **Coursework:** Data Mining, Datacenter Scale Computing, Natural Language Processing, Big Data Architecture, Software Engineering, Computer Graphics, Capstone Project

Sardar Patel Institute of Technology   *August 2018 – May 2022*
BTech in Information Technology

- CGPA: 9.07/10
- **Coursework:** Advanced Data Structures, Object Oriented Programming, Software Engineering, Computer Networks, Advanced Database Systems, Data Warehousing and Mining, Machine Learning Lab, Data Analytics, Soft Computing

Experience

Security Data Scientist Intern   *Boulder, USA*
Splunk, a CISCO compnay   *June 2025 - September 2025*

- Designed and deployed an AI-based Smart Alert system to reduce manual review of large volumes of alerts, built on ~400k security alerts and 100+ engineered features to automate classification and streamline analyst workload
- Developed an interactive UI integrated with the ML pipeline, enabling one-click application of AI-suggested actions or manual overrides, ensuring flexibility, and analyst trust
- Project selected to be presented at .conf, Splunk's flagship global security and data conference, recognizing its innovation and impact

Conference and Space Intern   *Boulder, USA*
University of Colorado Boulder - Conference Services   *November 2024 - Present*

- Assist in planning and executing events ranging from departmental meetings to large conferences, ensuring alignment with CU Boulder's quality and sustainability standards
- Prepare detailed cost estimates and customized setup diagrams based on client specifications
- Manage client communications to address inquiries, confirm event details, and maintain strong client relationships
- Support on-site event logistics, adapting quickly to evolving needs and collaborating with internal teams to ensure seamless execution

Technology Senior Analyst   *Pune, India*
Deutsche Bank   *July 2022 - July 2024*

- Built a fault-tolerant data ingestion pipeline in Java and Spring Boot to consolidate data from diverse sources into Oracle, improving reliability by 35% and streamlining NII calculations
- Designed and implemented an automated testing framework for onboarding processes, reducing manual QA by 50% and accelerating release cycles
- Enhanced CI/CD pipelines using TeamCity and deployed containerized services on OpenShift, reducing deployment effort by 30%
- Delivered reconciliation features through tight collaboration with stakeholders, ensuring 100% on-time delivery and accurate financial reporting

Web Development and Research Intern   *Mumbai, India*
Panel Technologies India Private Limited   *January 2022 - July 2022*

- Engineered a hybrid recommendation engine in Python and Scikit-learn, improving accuracy by 15% and

increasing user engagement by 20%

- Streamlined deployments using Git and Bitbucket, cutting release cycle time by 25% and enhancing CI/CD consistency
- Built ML pipelines with rigorous preprocessing and feature engineering, improving model precision by 20%
- Redesigned the company website using HTML, CSS, and JavaScript, reducing bounce rates by 30% and elevating user experience

Teaching Assistant *Mumbai, India*
Sardar Patel Institute of Technology *March 2021 - July 2021*

- Mentored a group of junior students throughout their academic research journey, enhancing their research skills and strengthening project outcomes by 30%
- Guided students in research paper preparation and coordinated conferences for publication, resulting in a 25% increase in accepted papers at academic conferences

Web Development Intern *Mumbai, India*
Panel Technologies India Private Limited *October 2020 - November 2020*

- Designed and launched the company website using HTML, CSS, and JavaScript, increasing customer sign-ups by 15% within the first month
- Enhanced site visibility and traffic by implementing SEO strategies and integrating Google Analytics, achieving a 20% increase in organic traffic and higher conversion rates

Publications

Detection of Mental Disorder on Social Platform February 2022
Python, Flask, LSTM, Machine Learning, Bootstrap
[7th International Conference on Computing in Engineering & Technology (ICCET 2022)](#) ↗

- Developed a platform that performed comparative analysis on consumer information collected from multiple social media platforms over a specified period, providing insights into mental health trends
- Implemented prediction model using LSTM with 97% accuracy, assessing the likelihood of audience having one of the three mental disorders
- Designed a user-friendly survey for gathering behavioral evidence, aiding users in identifying potential conditions
- Evaluated the model against benchmarks using advanced machine learning techniques

Farming Made Easy using Machine Learning February 2022
Python, Scikit-learn, Flask, Socket, Bootstrap
[7th International Conference on Computing in Engineering & Technology (ICCET 2022)](#) ↗

- Developed a platform that performed comparative analysis on consumer information collected from multiple social media platforms over a specified period, providing insights into mental health trends
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Projects

SemEval-2025 Task 8

- Collaborated on a research project for SemEval-2025 Task 8, developing question answering systems over tabular data using LLaMA-3 models. Implemented and evaluated three LLM-based strategies: baseline full-table input, retrieval-augmented generation (RAG), and two-phase prompting with column filtering. Leveraged FAISS indexing and prompt engineering to optimize performance across diverse question types. Achieved up to 49.7% accuracy, surpassing prior benchmarks and demonstrating improvements in answer quality and column selection.

VoxOff: AI-Powered Karaoke Web App *[github.com/voxoff](#)* ↗

- Built a full-stack karaoke web application with real-time vocal separation, forced lyrics alignment, and a

synchronized lyrics player. Designed a hybrid architecture combining local preprocessing with GKE-based microservices for scalable audio and lyrics processing. Integrated YouTube and Genius APIs, and deployed infrastructure using RabbitMQ, Terraform, Firestore, and Google Cloud Storage. Implemented Google OAuth authentication for account-based history and personalized recommendations. Achieved 2–3 minute processing per song and showcased at CU Boulder's ATLAS Expo, processing 100+ songs without failure

NarrateNow: Chapter-wise audiobook generation service   *github.com/NarrateNow* ↗

- Developed a Python-based scalable application that converts EPUB books into chapter-wise audiobooks exercising Google Text-to-Speech API. Designed a Kubernetes-based microservice architecture, employing RabbitMQ and Redis for task orchestration and real-time tracking, while integrating Google Cloud Storage for secure data handling. The service processed an 11-chapter book (150 pages) in under 4 minutes and demonstrated the ability to handle 50+ simultaneous requests without errors, emphasizing reliability and scalability.

MoodyTunes: A DL-based Music Mood Classifier   *github.com/MoodyTune* ↗

- Developed a deep learning-based music classification system by make use of Python, TensorFlow, and Keras to categorize songs into emotional moods—happy, sad, calm, and energetic. Integrated enriched datasets from Spotify (278k songs) and Last.fm, achieving 90.67% accuracy by leveraging MFCCs, spectral contrast, and user tags. Optimized neural networks such as ANN, RCNN, and LSTM, resulting in an average performance boost of 4% across all models.

Early Warning System   *github.com/EarlyWarningSystem* ↗

- Developed a weather-sensitive alert solution for patients with weather-related health conditions, integrating real-time pill dosage tracking and alerts to improve medication adherence by 15%. Utilized a weather prediction model to anticipate potential health triggers and incorporated the Google Maps API to help users locate nearby hospitals. Built a responsive user interface using JavaScript and Flask, enhancing client engagement and system reliability.

Technologies

Languages: Python, Java, C++, SQL, Bash

Frameworks and Libraries: Hive, JDBC, Spark, REST APIs, Junit, Cucumber, Flask, Docker, Spring, Spring Boot, Django, Tkinter, Swing, AWT, TensorFlow, Pandas, NumPy, Data Visualization, Pytorch

Databases: MySQL, Oracle, MSSQL, PostgreSQL

Tools and Technologies: Maven, Gradle, Git, YAML, JSON, Terraform, IntelliJ, Eclipse, Microsoft Visual Studio, PyCharm, Mockito, Openshift Fabric, Bitbucket, WordPress, Tableau, Helm, Jenkins, Excel, Jupyter

Cloud and Distributed Computing: Kubernetes, GCP, Google Cloud Compute, Google Cloud Storage (GCS), Google Kubernetes Engine (GKE), Firestore, Cloud Run Functions, RabbitMQ, Apache Airflow, Hadoop

Operating Systems: Linux, MacOS, Windows

Awards

Quarterly Performance Appreciation Award - 2023 Q4

- Received Appreciation Award for being among the top performers in the Treasury department in 2023 Q4

Volunteering

30+ Hours of SEVA

- Volunteered for Mumbai's Beach Cleaning

Women in Technology - Deutsche India

- Was an active member of the Women in Technology session held in Deutsche Bank which includes Women in Data Science to enrich my technical understanding

Cultural Fest - Sardar Patel Institute of Technology

- Part of Sardar Patel Institute of Technology's Fest Cultural Committee, where I organized and scheduled cultural events throughout the academic year

Hackathons

- **AWS Hackathon 2025 (CU Boulder, March 2025):** Solved 9 out 13 challenges
- **SPIT Hackathon 2021 (SPIT Mumbai, February 2021)**

Certificates

- **Mastering Data Analysis in Excel (Coursera, October 2021)** ↗
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- **Introduction to Web Development (Coursera, June 2020)** ↗
- **Programming for Everybody - Getting Started with Python (Coursera, June 2020)** ↗
- **Problem Solving - Basic (HackerRank, June 2020)** ↗
- **Python - Basic (HackerRank, June 2020)** ↗