Ninad Deshpande

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Education

MS in Computer & Information Science (May 2025) GPA 3.79
Indiana University - Purdue University, Indianapolis, IN, USA

BE in Computer Engineering (May 2022) GPA 9.25/10
Savitribai Phule Pune University, Pune, MH, India

Experience

Indiana University Indianapolis Indianapolis, IN
Student Researcher Aug 2024 – Present

- Processed 140,000 multilingual text entries (35K per language) to build scalable distributed NLP pipelines using BERT and SBERT-KMeans.
- Benchmarked over 180 ensemble configurations by generating intermediate datasets for language-specific model training and evaluation.
- Achieved macro-F1 scores of 0.85–0.92 by engineering trust-weighted consensus strategies for final prediction aggregation.

University Library, Indiana University Indianapolis Indianapolis, IN
Mailroom Tech Assistant Jan 2025 – May 2025

- Processed 1,500+ books and packages by managing library acquisitions mailroom workflows, coordinating deliveries across 5 carrier systems over 4 months.
- Built a Python automation script using Selenium to extract OCLC codes from MARC records into structured CSVs.
- Reducing manual entry by 90%+ during inter-library loan prep, by parsing institutional metadata to generate lightweight reports.

Projects

AI-Driven Cloud Auto-Scaling System
AWS, SageMaker, Lambda, CloudWatch, Machine Learning

- Reduced costs by 15–25% by predicting CPU usage and auto-scaling resources based on CloudWatch API metrics.
- Extracted time-series data from CloudWatch API to CSV format and engineered preprocessing pipelines with outlier handling and feature scaling for SageMaker input.
- Automated metric collection and scaling actions using Lambda and Auto Scaling groups for real-time deployment.

Customer Relationship Management: Web Application
PHP, MySQL, Bootstrap, AWS

- Integrated data from Excel sheets and digitized handwritten forms using structured MySQL schema and backend validation tools.
- Implemented ML model to predict lead conversion probability based on compiled customer data.
- Built interactive dashboards to visualize metrics over time and track generated leads for real-time insights.
- Used by over 1,000 users to manage customer leads across cloud-hosted infrastructure.

Enigma Machine Simulator
Python

- Designed a modular Python system with separate rotor, plugboard, and reflector components for encryption.
- Built a command-line interface supporting batch processing of text files and interactive usage.
- Implemented structured input/output handling and persistent logs to simulate data pipelines.

Skills

Languages: Python, C/C++, JavaScript, Java, R
Tech Stack: HTML/CSS, JavaScript, SQL, MySQL, PostgreSQL, NoSQL (MongoDB), AWS, Git, GitHub

Publication

- "A Modular Approach to Customer Relationship Management (CRM) Systems"
  IJARSCT Vol. 2, Issue 1, September 2022 — **DOI: 10.48175/IJARSCT-7119**