

Ninad Deshpande

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EDUCATION

Master of Science in Computer & Information Science (May 2025)
Indiana University - Purdue University, Indianapolis

GPA 3.79

EXPERIENCE

Indiana University Indianapolis

Indianapolis, IN
Aug 2024 – Present

Research Assistant

- Developed a peer-to-peer distributed system, enabling scalable moderation across 4 languages and reducing processing bottlenecks.
- Simulated subject-specific model expertise using SME clustering with BERT and SBERT-KMeans, improving detection accuracy in low-resource languages.
- Enhanced ensemble decision-making by applying incremental learning and trust-weighted consensus, achieving macro-F1 scores of 0.85–0.92 across key language groups.
- Benchmarked over 180 model and ensemble configurations, validating performance improvements in distributed NLP pipelines and preparing findings for academic publication.

University Library, Indiana University Indianapolis

Indianapolis, IN
Jan 2025 – May 2025

Mailroom Tech Assistant

- Processed 1,500+ books and packages by managing library acquisitions mailroom workflows, coordinating deliveries across 5 carrier systems over 4 months.
- Proactively developed Python automation tool using Selenium to streamline OCLC code extraction from MARC records, improving interlibrary loan processing efficiency.
- Automated institutional data parsing from OCLC directories, generating structured CSV/TXT reports that eliminated 90%+ of manual processing tasks.

PROJECTS

AI-Driven Cloud Auto-Scaling System

AWS, SageMaker, Lambda, CloudWatch, Machine Learning

- Reduced operational costs by 15-25% by developing and implementing a time-series forecasting model with Amazon SageMaker to optimize resource allocation.
- Engineered automated scaling pipeline with AWS Lambda, CloudWatch metrics collection, and Auto Scaling groups for predicting CPU usage 15 minutes ahead and adjusting resource allocation accordingly.

Customer Relationship Management: Web Application

PHP, MySQL, Bootstrap, AWS

- Reduced manual efforts by 70% by developed a CRM system using CodeIgniter, PHP, MySQL, and Bootstrap.
- Leveraged AWS for cloud deployment and implemented a real-time analytics dashboard for over 1,000 users.
- Programmed an ML model to predict lead closure, boosting predictive capabilities.

Enigma Machine Simulator

Python

- Simulated the WWII Enigma encryption mechanism with configurable rotor and plugboard settings.
- Built an interactive command-line interface to demonstrate encryption-decryption cycles.
- Added persistent message history and automated cipher routines for usability.

SKILLS

Programming Languages: Java, Python, C/C++, JavaScript, SQL, R

Web, Cloud & DevOps: HTML/CSS, JavaScript, NoSQL (MongoDB), AWS, Git, GitHub

PUBLICATION

- ”A Modular Approach to Customer Relationship Management (CRM) Systems”
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