

# Nandini Tripathi

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## EDUCATION

### University of Florida, Gainesville, FL

**GPA: 3.83/4.0**

*Bachelor of Science in Computer Science, Minor in Mathematics*

*Aug. 2020 - May 2024*

**Relevant Coursework:** Operating Systems, Data Structures and Algorithms, Distributed Systems, Information & Database Systems, Computer Organization & Architecture, Natural Language Processing, Machine Learning

## TECHNICAL SKILLS

**Languages:** Python, Java, C/C++, SQL, JavaScript, Typescript, Golang, Shell Script, HTML5, CSS3

**Frameworks/Tools:** AWS, MongoDB, Azure, React.js, React Native, Angular.js, Node.js, Flask, Keras, Scikit-Learn, Tensorflow, Pandas, NumPy, PyTest, JUnit, Mockito, Postman, SonarQube, Heroku, Docker

## PROFESSIONAL EXPERIENCE

### Software Engineer Intern

Sep. 2024 - Jul. 2025

*Technical Consulting & Research*

*Newark, NJ*

- Developed a secure full-stack web application using React and Python Flask, integrating Auth0 for authentication, token-based security, and role-based access control; deployed on Heroku for scalable cloud hosting
- Created a cross-platform mobile application with React Native, adapting and optimizing the existing web app for mobile users with a consistent UX and full feature parity
- Designed and implemented a scalable MongoDB backend on Azure for session management and user data, ensuring high availability and performance

### Software Engineer Intern

Jul. 2023 - Aug. 2023

*Tata Consultancy Services*

*Gainesville, FL*

- Engineered Python web scraping script, extracting text from URLs and sub-URLs to generate JSON files, laying the foundation for LLM, reducing data pre-processing time by 15%
- Curated airline reviews, trained generative AI model for automated reports, enabling improved customer service
- Conducted sentiment analysis on 200+ audio and text-based hotel feedback entries, yielding actionable improvement insights for hotel management

## PROJECTS

### Movie Recommender System | Golang, Node.js, Angular.js, MySQL, AWS

Jan. 2024 - Apr. 2024

- Spearheaded the development of a web-based movie recommendation system leveraging content-based filtering and enhanced by Google's Gemini LLM for more refined and personalized suggestions
- Led the implementation of a responsive UI using Angular.js with Typescript and a streamlined RESTful backend using Golang connected to MySQL database hosted on AWS

### Peer-to-Peer File Sharing System | Java, Networking, Distributed Systems

Aug. 2023 - Dec. 2023

- Developed a Java-based distributed, multi-threaded peer-to-peer file sharing system with structured peer communication algorithm for efficient and fault tolerant transmission
- Achieved 3x improvement in transmission speeds compared to traditional file transfer architectures with fair and distributed network utilization

### Image Based AQI Prediction | Python, Deep Learning, CNN

Aug. 2023 - Dec. 2023

- Constructed CNN models for the prediction tasks encompassing AQI parameters and AQI categories
- Obtained mean accuracy of 95.79% on classification task using transfer learning models

### Tic-Tac-Toe AI Agent | Python, Machine Learning, Deep Learning

Aug. 2023 - Dec. 2023

- Performed a rigorous comparative analysis of Linear SVM, K-Nearest Neighbors (KNN), and Artificial Neural Network (ANN) models on a Tic-Tac-Toe dataset for move and winner prediction
- Engineered a high-accuracy (95%) ANN-based model to power an AI agent capable of near-perfect gameplay

### Full Compiler Implementation | Java, JUnit

Jan. 2023 - Apr. 2023

- Created a custom Java compiler from scratch, scanning and processing 10+ token types and 25+ keywords, conducting in-depth analyses of lexical structure and grammar syntax
- Conducted comprehensive testing with 150+ JUnit test cases for scanner and parser components