

# Bhanu Rekha Musuluri

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## EDUCATION

### Master of Science in Computer Science

August 2022 - December 2023(Anticipated)

University of Florida - Gainesville, Florida, US

Relevant Coursework: Analysis of Algorithms, Mathematical Induction Systems, Distributed Operating systems and principles.

### Bachelor of Technology in Information Technology

June 2017 - May 2021

R.V.R & J.C College of Engineering- Guntur, Andhra Pradesh, India

GPA: 3.64/4.00

## TECHNICAL SKILLS

**Programming Languages:** C, C++, Java, Python, SQL, JavaScript, HTML/ CSS

**Databases:** MySQL, Oracle (PL/SQL), PostgreSQL, Mongo, Redis, Kafka, Solr

**Frameworks/Tools:** MATLAB, Postman, Spring Boot, Flask, Unicorn, Mockito

**Machine Learning (Libraries):** Pandas, Scikit Learn, NumPy, TensorFlow, SciPy, NLP

**Methodologies:** Agile, Scrum

**Spring Tools:** GitHub, Gitlab, Suite

## PROFESSIONAL EXPERIENCE

### Software Engineer, Engati Technologies - Bengaluru, India

July 2021 - July 2022

**Technologies:** RASA, Natural Language Processing, Java, Python, Database, Solr, REST API

- Developed 3+ AI driven systems using **RASA** and models for natural language processing in chat bots to detect the intents and sentiments.
- Enhanced the **Conversational AI** components of the Chat bot building platform. Built automated data pipelines for training, augmentation, testing, and deployment of 2 domain intelligent chat bots in the e-commerce space.
- Built a multilingual search in documents powered by recent **Transformer models** and a message processing unit on **Kafka**.
- Automated the query detection framework which increases the testing efficiency by 20% and conserved the overall testing time.
- Consolidated databases like **SQL**, **Mongo** and **Redis** for caching which cut down the overall lag by 60%.
- Implemented a search system using the search engine framework **Solr** with an improved speed of 74%.
- Integrated Shopify with the chatbot and created a dashboard for the user interactions and insights for the 70+ store owners.
- Trained and deployed language models for supporting 50+ language across the platform for user interactions.
- Collaborated closely with the testing team for priority issue fixing within 24 hours and coordinating test set up for testing.
- Applied GIT controls to track and maintain the different versions of the tier 1 projects.
- Mentored 5 interns with peer-to-peer code reviews, architectural KTs and overall design of the platform.

### Junior Software Developer - Internship, Quinbay Technologies - Bengaluru, India

January 2021 – June 2021

**Technologies:** Python, Java, Qdrant Vector DB, Transformers

- Facilitated a natural language query-based product discovery, multi-modal vector search, visual search, scaling model inference throughput by onnx optimization and quantization.
- Developed an ecommerce application for selling books online using Spring Boot, Java, PostgreSQL, firebase, and Android Studio that can process up to 100 parallel requests with low latency.

## PROJECTS

### Terminal Assistant | Python, GPT-3, Transformers

- A lightweight terminal assistant to give natural language interface to the terminal command with GPT-3 from Open AI.
- Co-ordinated the integration of the library and the transformers model for semantic similarity which increased the accuracy to 79%.

### Accurate System for Face Detection | Python, Jupyter, Scikit Learn, NumPy, Pandas.

- Designed a pipeline that use DPSSD for detecting faces and trained on benchmark data sets to achieve state-of-art performance.
- The detection accuracy increased by 20% even for smaller scale faces in images.

### Airline Reservation System | XAMPP for Apache and MySQL, HTML, CSS, PHP.

- The project allows to store information about flights and allows the users to book tickets and the administrators to maintain database.
- Took the leadership for the team of 3 and helped in team collaboration.

### Automated Framework for Question Generation | Python,

- A seq-to-seq model that generates questions based on the given paragraphs for training FAQs later.
- Given a paragraph as input the system predicts different questions regarding the paragraph. This refines the mapping and stores in the system as FAQs.
- Users can raise questions in a paragraph and returns the answer.