HARSHITH MAKKAPATI

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# Education

## University of Houston, Houston, TX MAY 2025

*Master of Computer Science – Coursework: Visualization, Big Data, Cloud Computing, Statistics, Data Structures CGPA: 3.77*

## Jawaharlal Nehru Technological University, Hyderabad, India. AUG 2023

*Bachelor’s in Computer Science – Coursework: Object Oriented Programming, Database, SQL, Algorithms CGPA: 9.07/10*

# Technical Skills

* **Programming Languages**: Python, Java, HTML, CSS, JavaScript, C++, Linux, MATLAB, BASH
* **Database:** Postgres, DynamoDB, MySQL, NoSQL: MongoDB, Elasticsearch, AWS: Neptune, Aurora, RDS
* **Frameworks**: Spring, Hadoop, PySpark, React.js, Angular, Django, Flask, Node.js, Scikit Learn, Keras, Naıve Bayes, SVM, OpenAI, NLP, LLM, GraphQL, Hibernate, Sequelize, Spring MVC
* **Cloud and Infra:** Docker, Kubernetes, GCP, Kafka, Linux, Jenkins, DevOps, AWS (EC2, S3, EKS, ECR, EB, ECS, SQS, SNS), Git, GitHub, Terraform, Ansible , Unix, Gradle, Maven
* **Others:** Cloud Computing, Algorithm Design, Schema Design, Data Structures, Distributed Systems, Distributed Storage, Distributed Systems, Operating Systems, Data modeling, XSS, Load Balancing, CSRF, Jira, Postman, Agile and Scrum Methodologies, Software engineering practices, Testing

# Experience

**University of Houston MAR 2024 – Present**

*Research Assistant — Application Developer Houston, TX*

* Improved code maintainability and reduced development time by 25% through modular, reusable UI components using React, JavaScript, HTML, and CSS.
* React Memo and useCallback were used to enhance rendering performance, reduce load times, and increase user engagement by 30%.
* Collaborated with cross-functional teams in delivering UI/UX designs that fulfilled the product specifications while elevating customer satisfaction by 15%.
* Improved UI stability and reduced production problems by 20% through test automation frameworks (Cypress, Jest).
* Redux was adopted to manage state, which improved the performance and data flow of dynamic web apps.

**CS Tech Solutions JUL 2021 – FEB 2024**

*Full Stack Developer Remote*

* Improved user experience by creating dynamic web applications with React, Vue.js, and JavaScript.
* Node.js and Express were utilized in the development of RESTful APIs for the data exchange between frontend and backend.
* Improved queries to support PostgreSQL and MongoDB databases with response times 40% quicker.
* Implemented CI/CD pipelines (GitHub Actions, Jenkins) to automate deployment for quicker releases.
* By using secured APIs with JWT authentication and Redis caching, latency was reduced by 35%.

**Ace Ventures Pvt Ltd MAR 2021 – JUL 2021**

*Software Developer Hyderabad, India*

* Developed and launched a Spring Boot, Node.js, and gRPC-based microservices backend to deliver low-latency interaction and high availability to approximately one million monthly active users.
* Implemented Redis for message queueing and distributed caching, which boosted backend performance, making it a breeze for the system to handle 100,000 concurrent users.
* Led the creation of an Angular, HTML, CSS, and JavaScript-based responsive frontend, which improved user experience and 40% of the user's interaction
* Simplified deployment and versioning of microservices through hosting scalable applications on Azure with Docker for containerization and Kubernetes for orchestration.
* Developed and optimized SQL stored procedures (Postgres, MySQL) and database queries to enable large volume data processing and minimize query response time by 50%.
* Implemented JWT/OAuth for enhanced security and access control in distributed services.

# Projects

**Human Mimic Chatbot using Transformers** *|* ***NLP, PyTorch, Deep Learning, Transformers* MAY 202**4

* Built a chatbot using transformers and NLP, applying LLMs and transfer learning to make responses 85% more accurate.

**Cloud-Based Spam Message Detection Using Tensorflow** *|* ***Java, AWS, Angular, MySQL* NOV 2024**

* Developed a 98% accurate spam filtering system using AWS services (EC2, Lambda, API Gateway, and SageMaker) for filtering in real time.

# Certification

* Google Cloud Engineer Program. Oracle Database Programming with SQL