

RITIKA GHANTI

SOFTWARE ENGINEER

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EDUCATION

Master of Science in Computer Science (GPA: 4.0)

The University of Texas at Arlington

Software Engineer and Artificial Intelligence specialization

Aug 2023 – May 2025

Bachelor of Engineering in Computer Science (GPA: 3.6)

Don Bosco College of Engineering, India

Jun 2019 – Jul 2023

SKILLS

- **Languages:** Java, Python, C++, JavaScript, Kotlin, PHP, C, C#, SQL, NoSQL
- **Database:** MySQL, Oracle DB, MongoDB
- **Networking:** TCP/IP, DNS, IPv4, IPv6, Load Balancing, Routing Protocols, Network Virtualization, HTTPS
- **Web Technologies:** XML, JSON, Node.js, JavaScript, React, TypeScript, Angular, REST APIs, Junit, Selenium
- **Cloud:** AWS, Google Cloud, EC2, Kubernetes, S3, Docker
- **Operating Systems:** Linux Kernel, Windows Kernel, QNX, FreeRTOS, Zephyr
- **Artificial Intelligence:** PyTorch, NLP, Scikit-Learn, Flask, TensorFlow, OpenCV

EXPERIENCE

Teaching/Researcher – The University of Texas at Arlington

Aug 2024 – Present

- Guided **100+** students in developing effective debugging strategies, **improving unit test** coverage by **15%**
- **Clarified** complex concepts for students, enhancing their understanding of software design principles
- **Collaborated** on assignment design, reinforcing concepts in web design and agile methodologies

Software Developer – CodeRelix

Jan 2023 – Jun 2023

- Designed a **responsive website** using **React.js**, **Node.js**, and **Java Spring**, improving UI performance by **20%**
- Developed **RESTful APIs** and integrated **third-party APIs**, improving data retrieval efficiency by **30%**.
- Implemented **unit and integration tests**, improving code reliability and reducing bug occurrences by **40%**

Software Engineer – Umang Technologies

Jan 2022 – Aug 2022

- Engineered web applications using Laravel, implementing MVC architecture and RESTful APIs for scalability
- Facilitated team collaboration through over **100 Git commits**, ensuring seamless version control
- Collaborated with cross-functional teams in an **Agile environment**, contributing to **weekly sprint goals**.
- **Reduced** bug reports by **20%** through active participation in code reviews and adherence to coding best practices

PROJECTS

Real-Time Object Detection System (YOLOv5, OpenCV, TensorBoard)

Nov 2024

- Integrated OpenCV for real-time detection and accurate visualization of bounding boxes on images and videos
- Augmented and preprocessed COCO dataset with YOLO format, transformations, and resizing to 640x640 pixels
- Trained YOLOv5 with optimized hyperparameters, monitoring metrics like mAP and loss via TensorBoard

Neural Chatbot (Retrieval Augmented Generation, LangChain, Intel Neural Chat 7B)

May 2024

- Gives **95% accurate responses** to questions asked from any uploaded document
- Orchestrated robust integration with LangChain for managing diverse components within the chat system, which enhanced operational efficiency and lowered maintenance overheads through automated processes handling daily tasks seamlessly
- Integrated BGE Embeddings and Chroma DB to **reduce query processing by 30%**

Musiqi (ReactJS, Shazam API, Selenium)

Apr 2024

- Pioneered a web application that seamlessly fetches and streams music using the Shazam API
- Provide users with an extensive and up-to-date music library using NodeJS, HTML and CSS
- Constructed the backend with NodeJS, achieving a **25% reduction** and ensuring **smoother user experience**
- Implemented **UI testing with Selenium**, reducing user-reported bugs by **20%** and improving application stability

LearnSketch (Python, Kotlin, Android Application Development, MongoDB)

July 2023

- Developed a user-centric mobile app that leverages advanced image recognition technology to identify discrepancies in artists outputs, leading to **40% less time** spent on revisions and increased client satisfaction
- **Minimized** sketch inaccuracies by **15%**, **improving user satisfaction** and efficiency in art projects
- Optimized the app's performance, **reducing** the app's load time by **40%**, ensuring smooth functionality