SRIKAR KOTRA

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EDUCATION

University of Texas at Dallas, Richardson   08/2023 – 05/2025
Master of Science in Computer Science   **GPA 3.91**

Vellore Institute of Technology, Vellore   06/2018 – 06/2023
Master of Technology in Software Engineering │ Bachelor of Technology in Software Engineering   **GPA 9.30**

TECHNICAL SKILLS

Programming: Python, Java, Rust, Scala, R, HTML, CSS, JavaScript, C, C++, REST API, jQuery, SQL, MATLAB, Git
Cloud & Development Tools: AWS, Azure, Salesforce, Snowflake, Kafka, Airflow, Docker, Kubernetes, Postman, Selenium, Bash, JIRA, SDLC, Agile
Data Analysis Tools: Spark, Databricks, Power BI, Tableau, SAS, Excel, SSIS, SharePoint, Matplotlib, Seaborn, Postscript, Tesseract, R Studio
Frameworks / Packages: Java Spring Boot, React, Node, Express, Pyspark, Flask, NLTK, SpaCy, TensorFlow, PyTorch, Selenium, Pandas, OpenCV
Databases: MySQL, Oracle, Postgres, MongoDB, Hadoop, Hive, HBase, Cassandra, GraphQL, Cloud SQL, BigTable, BigQuery, AWS RDS, DynamoDB

WORK EXPERIENCE

UT Dallas Office of Information Technology, Richardson – *AI Engineer*   08/2024 – Present
- Engineered advanced chatbot system with **domain-specific knowledge** on UTD Knowledge Base. Curated UTD knowledge base on **Amazon Kendra** and enriched the text with metadata for better indexing leading to 70% reduction in hallucination.
- Designed and developed automated step-functions to crawl web pages, convert data to JSON format, and create metadata tags, improving query resolution efficiency by **40%**. Leveraged a **RAG approach** with **LangChain** to fine-tune models, retrieving information from Amazon Kendra and utilizing **Bedrock models**, leading to a 25% increase in information retrieval accuracy

MTX Group, Dallas – *AI & Data Analytics Intern*   05/2024 – 08/2024
- Processed and analyzed responses to 15 questions from 1,300 accounts using **Salesforce Reports** for data extraction and **Snowflake** for efficient data storage and retrieval. Cleaned and preprocessed text data, applying clustering techniques to group similar responses into key themes. Generated category-level and account-specific summaries, driving a $300M pipeline in Q3 through specific recommendations for senior leadership.
- Conducted research evaluating **transformer-based** models (SpaCy, BERT, BART, T5) and **LLMs** (llama, mistral) to identify limitations in token capacity, output redundancy. Chose phi-3 LLM model to produce coherent summaries and integrated them into Salesforce and **Tableau** dashboards.
- Engineered and deployed a robust solution integrating Salesforce with **AWS SES**, using Lambda functions**, SQS**, and API Gateway to automate over 5,000 email deliveries with attachments monthly. Seamlessly managed data flow between **AWS S3** and Salesforce through **AppFlow** and Lambda, thereby improving compliance, communication efficiency, and data management for the Georgia State Government.

The University of Texas at Dallas, Richardson – *Research Assistant*   12/2023 – 05/2024
- Single-handedly orchestrated and automated end-to-end **data engineering** efforts, overseeing the meticulous preparation of a vast 40,000 - financial documents dataset spanning from 1994 to 2023. Employed diverse automation tools such as **Ghostscript** for PDF-to-PNG conversion, **Tesseract & Tabula** for OCR and table detection, Excel for data manipulation and Python scripts for precise data cleaning, achieving a remarkable 90% accuracy in data preprocessing automation.
- Developed and implemented **ETL** pipelines using **Microsoft Azure AI Document Intelligence** and **AWS Textract**, incorporating **Azure Blob Storage** and **AWS S3** buckets. Brought down research costs by 60% and boosted processing efficiency by 50%. Used **SAS** for advanced analytics, ensuring a refined financial dataset for continuous in-depth analysis.

Intel Technology India Pvt Ltd, Bangalore – *Software Development Engineer*   06/2022 – 06/2023
- Spearheaded the innovation of a **Semantic Document Engine** in collaboration with the Chrome SI Team and NLP team, combining a blend of Python, Rust, and advanced NLP techniques to deliver actionable insights by processing intricate **Jira** commands and queries. Achieved 95% relevancy in question-answering system and enhanced team satisfaction by **70%** through semantic role labeling.
- Incorporated cutting-edge Generative AI techniques, transforming the organization's data pipeline into an intelligent chatbot powered by **GPT-based** models and bringing down customer support costs by 20%. Automated tasks and data manipulation in VIBE, showcasing up to 100% proficiency.
- Seamlessly integrated the **ADA** framework into Intel's **OneCloud** platform, a pivotal milestone that strengthened connectivity and automation, resulting in a remarkable 30% decline in onboarding time, significantly maximizing efficiency and productivity.

AgBoost Tech Consultancy, Delhi – *Web Development Intern*   05/2021 – 01/2022
- Designed and deployed a dynamic web application utilizing **React**, **Node** and **MongoDB** to continuously analyze and visualize real-time data.
- Leveraged **Power BI** to offer in-depth data-driven insights on crop health, soil moisture levels, and weather patterns to farmers, thereby significantly boosting their decision-making by 15% contributing to more informed choices.

VMware, Hyderabad – *Software Engineer* (Certification)   06/2021 – 08/2021
- Gained practical insights into Java Spring Boot development, cloud deployment, and **VMware virtualization** through immersive training and developed a real-time inventory management application using Java Spring Boot for backend development**, Docker** for containerization, **Postman** for API testing, and **Heroku** for deployment, showcasing adaptability and competence in a professional setting. (Project Certificate)

Agixury, India – *Backend Developer* (GitLink)   12/2020 – 01/2021
- Collaborated backend development support applying PHP, SQL, JavaScript for the company's hotel website following Agile methodologies.

ACCOMPLISHMENTS

- Graduate Student Assembly (GSA)'s ECS Representative (Elections – Winner), UTD   08/2023 – Present
- Dean's Merit Scholarship Recipient, University of Texas at Dallas   08/2023 – Present
- Merit Scholarship Student, Vellore Institute of Technology   08/2018 – 05/2023

CERTIFICATIONS: AWS Cloud Technical Essentials, Salesforce Certified Administrator, SnowPro Core Certification, Google Data Analytics Professional Certificate, Prompt Engineering for ChatGPT, IBM Python for Data Science, Intel Product & Security Yellow Belt, Multimodal RAG more..

*****Personal projects are available on *https://github.com/srikar-kotra*