Parth Kansara

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PROFESSIONAL EXPERIENCE

AICAN   Remote
Software Engineering Intern   August 2023 - April 2024

- Developed a customizable ERP SaaS platform using **microservices** to optimize production flows for MSMEs in the manufacturing sector, improving operational efficiency by **35%**, enabling quicker decision-making and execution
- Leveraged **Next.js**, **React**, **JavaScript**, **ES6**, **TypeScript**, **Node.js**, **Redux** and **MongoDB** database to develop critical features for manufacturing job creation and process planning adopted by over **25+ clients**
- Rewrote the data telemetry module for shop floor sensors to replace the existing HTTP-based polling with **MQTT over WebSocket**, which improved latency and reliability for real-time monitoring and reduced failure response times by **45%**

Knowledge Systems Lab, Stony Brook University   New York, USA
AI Research Team Member   September 2023 - December 2023

- Led an AI-driven ESG analysis project using LLMs (**GPT-4 and Llama 2**), **HuggingFace Transformers**, and **Retrieval-Augmented Generation** (RAG) workflows via **LangChain**. Processed data for **300+ companies** across **386 subtopics** using **Python**, reducing analysis time by **75%** compared to traditional methods while ensuring real-time data accuracy through retrieval mechanisms
- Engineered and optimized LLM prompts using LangChain's **PromptTemplate** and **Few-Shot learning** techniques. Integrated RAG pipelines with a vector database using **ChromaDB** to enhance the relevance of AI-generated ESG insights, improving output accuracy by **45%** and providing actionable recommendations
- Developed a robust validation pipeline using **Weights & Biases** for experiment tracking. Enhanced observability of RAG workflows with detailed accuracy metrics, increasing the actionability of AI-generated ESG commentary by **55%**

Arthur J. Gallagher & Co. (Gallagher Re)   Remote
Software Development Engineer   July 2021 - July 2022

- Worked as a **Java** full stack engineer on iFM Online, a web application for financial modeling, leveraging **Core Java**, **J2EE**, **JSPs**, **Maven** and **Spring**, along with **CI/CD tools**, contributing to the end-to-end Software Development Life Cycle
- Enhanced scenario analysis reliability by fixing data parsing on the backend & sterilized data fields to avoid XSS injections, resulting in a **65%** reduction in data-related errors and a **100%** elimination of identified security vulnerabilities
- Streamlined online navigation by fixing redirection issues, marking a **30%** decrease in navigation-related support tickets and improvised shorthand notation parsing on the front-end to incorporate user comments, augmenting user experience

TECHNICAL SKILLS

Programming Languages: Java, Python 3, JavaScript, C++, SQL, Bash
Web Development Frameworks: HTML5, CSS, Servlets, JSP, Struts 2.0, MVC, Spring, Express.js, React, Node.js, Django
Databases: MySQL, Microsoft SQL Server, NoSQL - MongoDB, AWS RDS
Version Control and Deployment: GitHub, GitLab, Docker, Amazon Web Services AWS, Google Cloud Platform
Concepts: Object oriented Programming, MVC, Agile Methodologies, REST APIs, Algorithms, Cloud Computing

PROJECTS

A Review on In-Memory Caching Systems: Scalability, Efficiency and Optimizations   May 2023
Stony Brook University. Mentor: Dongyoon Lee

- Exploring Segcache and related in-memory caching systems, focusing on scalability, efficiency, and optimizations in key-value stores like Memcached and Redis

TelePhysio: Telemedicine Platform for Remote Physical Therapy   October 2022
Stony Brook University   [Java, Spring Framework, Docker, Kubernetes, Minikube, MySQL, WebRTC]

- Developed a **Java** based telemedicine application for remote physical therapy, containerized with **Docker** & orchestrated using local **Kubernetes** clusters via **Minikube**, with **Spring**, **WebRTC**, and **OOP** for real-time sessions and data management

EduStack: A Smart e-Learning Platform   March 2021
University of Mumbai   [Python 3, Django, Django REST framework, JavaScript, Node.js, React, MySQL]

- Engineered a **Python 3** full-stack web application, facilitating community-based education exchange via **REST APIs**

EDUCATION

Stony Brook University   Stony Brook, NY
Masters of Science in Computer Science, CGPA: 3.87/4   August 2022 - May 2025
Coursework: Computer Networking, Computer Vision, Operating Systems, Data Mining, Analysis of Algorithms

University of Mumbai   Mumbai, India
Bachelor of Engineering in Information Technology, CGPA: 8.99/10   August 2017 - May 2021