Kshitij Zutshi

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SUMMARY

Experienced Software Engineer with 5+ years in developing robust applications, designing scalable APIs, and implementing comprehensive testing frameworks. Proven expertise in optimizing performance and security to deliver high-quality software solutions

PROFESSIONAL EXPERIENCE

Software Engineer | Scale AI   **February 2024 – Present**

- Designed and implemented scalable RESTful APIs using Python and Fast API for integrating various LLM models (GPT-4o, LLaMA3) into a unified platform, enhancing model interoperability and performance
- Developed automated pipelines with GitHub Actions & Docker for analyzing code quality and collecting performance metrics using **SonarQube & Prometheus**, leading to **20%** improvement in model response times and accuracy
- Spearheaded the creation of modular testing framework utilizing PyTest and Postman to streamline the evaluation of AI model outputs

Software Engineer – Hospital Patient Monitoring | Philips North America   **January 2023 – August 2023**

- Engineered .NET microservices to streamline the ingestion and processing of hospital patient monitoring data, improving data retrieval speeds by **40%** using technologies like RabbitMQ and Kafka for real-time data streaming
- Developed robust APIs with ASP.NET Core and Swagger to facilitate seamless data exchange between hospital monitoring systems and cloud-based analytics platforms on AWS, ensuring high availability and security
- Implemented automated CI/CD pipelines using GitHub Actions, AWS Code Pipeline, and Terraform, enhancing the deployment and scaling of microservices across multiple environments by **50%**

Senior Software Engineer - Infrastructure | WebileApps LLC   **June 2019 – August 2021**

- Architected and developed key infrastructure components for the Indian e-Governance Portal's mortgage and estate modules, utilizing React, GraphQL, C#/.NET, and JavaScript (ES6+), integrated with PostgreSQL databases
- Built and optimized APIs for legal document uploads and verification using OCR, Elasticsearch, RESTful services; enhancing the system's ability to detect & prevent fraudulent activities by **40%**; API endpoints testing done using **Postman** and **Charles Proxy**
- Enhanced data processing workflows using Redis & Celery for high-traffic scenarios, increasing system performance by **70%**

Software Engineer | Infosys Limited   **September 2017 – June 2019**

- Contributed to the development of banking client's Customer Account Opening (CAO) and Retail Diary (RD) systems, focusing on improving data security using .NET Core, resulting in a **25%** reduction in security vulnerabilities
- Implemented eKYC (electronic Know-Your-Customer) features using .NET microservices, React, and PostgreSQL, incorporating third-party APIs for identity verification, accelerating customer onboarding by **35%** & increased verification accuracy by **20%**
- Optimized SQL queries and backend processes to analyze and reduce Customer Churn Rate (CCR) among users with special needs, leading to **30%** increase in customer retention

TECHNICAL SKILLS

Programming Languages:	Python, Java, JavaScript, C#, SQL (MySQL), GraphQL, Shell Scripting, Prompt Engineering
Frameworks:	ASP .NET Core, .NET Entity Framework, React
Big Data & Cloud:	AWS, S3, Sage Maker, Lambda, IAM, EC2, CloudWatch, CloudFormation, HDFS, Azure (DevOps, Container Registry), FAST API, Kafka, Serverless Framework, Kubernetes, Docker, Postman, Streamlit, Grafana, GitHub Actions, Argo CD, LLMs (ChatGPT, LLaMA, Claude3), YAML, git

EDUCATION

Northeastern University, Boston, MA   **December 2023**
Master of Science in Computer Software Engineering, GPA: 3.7/4.0
Relevant Coursework: Data Structures and Algorithms, Big Data Systems & Intelligence Analytics, Cloud Computing

Amrita Vishwa Vidyapeetham, India   **May 2018**
Bachelor of Technology in Computer & Electronics Engineering

PROJECTS

Delivered Content based Music Recommendation system for Spotify Music Data
Technologies: Python, AWS, SQLite3, SMTP, GitHub Actions, PyTest, Locust, Streamlit

- Ingested Spotify **Millions Playlist Dataset** to Extract, Enrich and create tables using **Python** & **SQLite3** database; Leveraged **AWS** Sage Maker to train, deploy **KMeans** Clustering model and expose model as an **API** endpoint via **Lambda** Trigger
- Incorporated **Streamlit** to create a frontend application & developed **YAML** github actions workflow to send weekly recommendations, user analytics to users using **SMTP** server

Deployed End-to-End Big Data pipeline for SEVIR (Storm Event Imagery) dataset on cloud
Technologies: AWS S3, HDFS, GCP (Buckets, Dataflow, Big query, Data Studio), ETL, FAST API, Docker, Streamlit, Serverless

- Performed Ingestion and **ETL** on **MIT** Storm Event Imagery (SEVIR) dataset **challenge** (**2TB** Dataset Size) using **Airflow**
- Built Machine Learning as a service product for pre-trained **Nowcasting** intelligence system in Media Outlets; deployed model using **Docker**, **FAST API** and Streamlit
- Exposed **Hugging Face BERT** NLP models as an API by deploying it to AWS using **Serverless** Framework to get **Named-Entity Recognition, Question & Answering and Summarization** on Storm event and episode narratives