Abhishek Tiwari

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EDUCATION

University of Texas at San Antonio- Master of Science: Computer Science Jan 2022 - Dec 2023
Coursework: Large Scale Data Management, Analysis of Algorithms, Operating Systems, Software Engineering, Computer Architecture, Cloud Computing, Data Science, Software Validation and Quality Assurance.

Rajiv Gandhi Prodyogiki Vishwavidyalaya- Bachelor of Engineering: Computer Science Jul 2015 - Jun 2019
Coursework: Distributed Systems, Database management, Data science and big data, Cloud Computing and Machine Learning.

EXPERIENCE

University of Texas at San Antonio- Graduate Research Assistant May 2022 - Aug 2024 | San Antonio, TX
- Integrated open-source messaging software (Java, Swift) into AWS-based platform, enabling multimedia support (GIFs, video thumbnails) for Android and iPhone.
- Optimized communication and planned a separate mobile app with Twilio Conversations for multi-channel support.
- Explored and evaluated group chat-free, server-based open-source solutions to enhance messaging functionality.

Ntier Infotech- Senior Software Engineer Jul 2019 - Oct 2021 | Indore, India
- Streamlined communication and increased visibility of products from SQL backend to content management system, to platform.
- Developed a translation engine that managed our data programmatically throughout full-stack web infrastructure.
- Worked with cloud solutions like DynamoDB, S3, SQS, Docker, and Kubernetes, developing comprehensive procedures for monitoring, recovery, backup, and system optimization.

Google- Software Development Engineer Intern Apr 2016 - Aug 2016 | Remote
- Developed an end-to-end integration testing framework to test all the changes made in the configuration and deployment of Docker images in the Kubernetes cluster.
- Integrated the testing framework with Jenkins build system to facilitate automatic test triggers in git pushes and generated results.
- Automated test result generation to provide comprehensive and streamlined feedback for deployment processes.

SKILLS

- **Programming Languages:** Java, Python, Go, JavaScript, Scala and SQL
- **Cloud Technologies:** AWS (S3, DynamoDB, EC2), Google Cloud Platform, Snowflake (Data warehousing)
- **Frameworks-** Spark, Spring, Kafka, Django, NodeJS, React, Bootstrap, Flutter
- **Databases-** MySQL, PostgreSQL, MongoDB, Firebase Realtime Database

PROJECTS

Learning Management System *Education Technology*
- Designed and implemented a platform for managing courses and tracking user progress using Java, NodeJS, and MySQL.
- Optimized database queries to ensure scalability and high performance for large user bases.
- Enabled efficient course assignment and content delivery with a robust backend and user-friendly frontend.

Food Market *Healthcare and Consumer Applications*
- Developed a web application using React and Spring Boot to provide insights on food products, their ingredients, and potential allergens for informed decision-making.
- Integrated AWS RDS with Postgres for backend storage and transformed FDA data into actionable insights for users.
- Deployed the app on Heroku for seamless user access, ensuring data security with environment-based credential handling.

Tracking Hacked Websites *Cybersecurity and Data Analytics*
- Leveraged Shodan CLI with Python to collect and analyze hacked website data, including attacker details and locations.
- Built a dynamic Google Firestore database to update data every 3 hours for real-time insights.
- Designed data visualizations with bar graphs and world maps to display trends in website defacements.

Thrift-Trail *E-Commerce and Sustainability*
- Developed a dynamic e-commerce platform using React and JavaScript to sell curated and restored pre-owned items.
- Streamlined data flow and backend integration to optimize processes for managing product restoration and listing.
- Designed a responsive and user-friendly interface, enhancing navigation and improving customer experience.

Bollywood Movie Recommender *Media and Entertainment*
- Built a movie recommendation engine using Python, Pandas, and NumPy to process data and generate recommendations.
- Applied content-based filtering and cosine similarity techniques to identify patterns and suggest personalized movies.
- Developed an interactive interface to display results and support user interaction.