Sohail Khan Pattan

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EDUCATION

Master of Science in Computer Science   **Jan 2023 - Dec 2024**

University of Alabama at Birmingham, Birmingham, AL.

Relevant Coursework: Distributed Systems, Web Application Development, Database Systems, Cloud Computing

WORK EXPERIENCE

Software Developer, University of Alabama at Birmingham**,** Birmingham, US   **Feb 2023 - Dec 2024**
- Revamped departmental web applications by engineering a scalable solution with Next.js, React, TypeScript, and Express.js, achieving 30% faster page loads, 100% Lighthouse accessibility scores, and 99.9% uptime with proven excellence.
- Developed RESTful APIs and microservices that reduced response times by 40%, enabling smooth real-time operations for high-traffic services through innovative caching strategies and optimized code while ensuring robust system security.
- Implemented WCAG 2.2 AA standards (using Lighthouse and axe DevTools) by incorporating adaptive UI components, ensuring full accessibility compliance across platforms and exceeding client expectations in user engagement.
- Set up CI/CD pipelines with Docker and AWS via GitHub Actions, reducing deployment time by 70% and eliminating downtime during releases while ensuring seamless automated testing integration and consistently flawless performance in production.
- Established robust monitoring with Sentry, Prometheus, and CloudWatch, proactively reducing production incidents by 30% and ensuring system reliability while consistently delivering real-time alerts and detailed performance analytics.

Software Engineer, Virtusa, Hyderabad, India   **May 2021 - Dec 2022**
- Transformed a legacy monolithic application by migrating to a modern React/Tailwind CSS front end with Node.js APIs, cutting latency by 45% and accelerating feature releases by 50% and significantly enhancing overall performance.
- Revitalized data access by migrating from SQL Server to MongoDB with optimized indexing, significantly reducing query times and improving real-time data retrieval, ultimately enhancing user experience and overall operational efficiency across systems.
- Integrated Apache Kafka and WebSocket-based updates to enable real-time streaming, eliminating multi-minute delays and reducing data processing time by 40%, resulting in improved operational efficiency overall.
- Containerized services with Docker and orchestrated AWS deployments, enhancing scalability and reliability under high load.
- Collaborated in Agile (Scrum/Kanban) teams, participating in code reviews, sprint planning, and technical discussions, ensuring efficient teamwork, delivering production-ready applications, and improving development workflows and best practices.

CERTIFICATIONS

Java Oracle Certified Associate (OCA)   **April 2022**

Oracle Certified Associate in Java, demonstrating proven expertise in Java programming and object-oriented concepts.

PROJECTS

CarePulse – Healthcare Management System   **Github**
- Delivered a secure, full-stack healthcare platform using Next.js, TypeScript, and Appwrite, streamlining real-time appointment scheduling and patient management, which reduced appointment no-shows by 30% while delivering enhanced patient outcomes.
- Integrated NextAuth for role-based access control and multi-factor authentication, enhancing data security and ensuring only authorized access to sensitive health data while maintaining strict HIPAA compliance and comprehensive audit trails.
- Implemented automated SMS notifications using Twilio to remind patients and healthcare staff, resulting in improved communication and scheduling efficiency while reducing appointment cancellations significantly.
- Ensured WCAG 2.2 AA compliance by utilizing Lighthouse and axe DevTools, thereby providing an inclusive user experience for all.
- Deployed the platform on scalable AWS infrastructure with Docker, achieving high performance and reliability during peak usage.

Promptopia – AI Prompt Sharing Platform   **Github**
- Developed a scalable prompt-sharing platform with Next.js and React, enabling users to create, edit, and share AI-generated prompts in real time while driving community engagement and accelerating user growth, boosting platform retention.
- Integrated secure OAuth login via NextAuth, ensuring seamless, token-based authentication and enhanced user session management, resulting in increased user satisfaction and reduced support tickets.
- Engineered an advanced search and tagging system using AI-powered semantic search with MongoDB indexing, achieving sub-100ms query response times and doubling prompt discovery speed while significantly increasing overall user engagement.
- Optimized server-side rendering and caching strategies to maintain low latency under heavy user traffic, supporting a rapidly growing user base and significantly reducing load times during peak demand with efficient resource allocation.
- Collaborated with design and product teams to refine the user interface, resulting in a polished platform that increased user engagement and sign-ups.

TECHNICAL SKILLS

- **Programming:** JavaScript (ES6+), TypeScript, Python, Java, C#, SQL
- **Databases & Warehouses:** MySQL, MongoDB, Databricks, Snowflake, AWS Redshift.
- **Frameworks & Libraries:** Next.js, React.js, Google O Auth, Twilio, Spring Boot, Hibernate, J2EE
- **Visualization & Other Tools:** WebSphere, JBoss, Sigma, Docker, GitLab, Jira
- **Cloud/ DevOps:** AWS (EC2, S3, Lambda, CloudWatch), Docker, Kubernetes, CI/CD (GitHub Actions, Jenkins)