Hanzla Sibghat

Munich, Germany hanzlasib24@gmail.com 0170 880 82 02 https://www.linkedin.com/in/hanzlasibghat/
https://github.com/hanzla-sib

Education

Universität Passau *October 2024 – current*
MS in Computer Science

National University of Computer And Emerging Sciences *August 2019 – June 2023*
BS in Computer Science

Experience

Software Engineer *Islamabad, Pakistan*
National Database and Registration Authority (NADRA) *Feb 2024 – July 2024*

- Spearheaded the integration of server-side rendering (SSR) with Next.js, reducing page load times by **30%**, which directly improved user retention rates by **15%**.
- Architected a secure API gateway using NestJS with advanced caching strategies, reducing repeated API calls by **40%**, and ensuring a seamless data flow between frontend and backend.
- Implemented advanced lazy loading techniques and intelligent code-splitting to enhance application scalability, which resulted in **99.8%** uptime during high-traffic events.
- Designed and enforced multi-layered validation pipelines using React Hook Form, Yup, and NestJS, achieving zero data discrepancies and strengthening system reliability.
- Enhanced system resilience by embedding robust error-handling middleware in NestJS, reducing downtime by **20%** during critical operations.
- Refactored legacy React code to a modular, maintainable structure, reducing code duplication by **35%** and ensuring scalability for future enhancements.
- Implemented advanced state management strategies using Redux Toolkit and React Context API, improving data flow consistency and reducing debugging time by **40%**.
- implemented real-time updates features with WebSocket and React Query, ensuring smooth and consistent user interactions during high-traffic operations.

Software Engineer *Mississauga, Canada*
PLC Group *(Remote)*
june 2023 – Feb 2024

- Created highly reusable, responsive, and accessible UI components in React, reducing UI development time across projects by **20%** and improving maintainability.
- Leveraged TypeScript and GraphQL to implement scalable APIs, reducing backend queries' complexity by **35%** and significantly boosting overall application performance.
- Optimized real-time data fetching by utilizing React Query and GraphQL subscriptions, improving data consistency and cutting refresh intervals by **50%**.
- Developed comprehensive test suites using Jest and React Testing Library, achieving **95%** code coverage and reducing post-deployment bugs by **40%**.
- Implemented advanced caching strategies and state management optimizations with React Context API and Redux, reducing API latency by **40%** and ensuring high responsiveness for user interactions.

React Developer *Islamabad, Pakistan*
Zuntech Technologies *January 2023 – June 2023*

- Built interactive and dynamic user interfaces using React and React Router, enabling seamless navigation and enhancing user experience across multiple web applications.
- Optimized application performance by implementing React.memo, useMemo, and useCallback, reducing unnecessary re-renders and improving app responsiveness by **20%**.
- Integrated RESTful APIs into React applications, ensuring smooth data synchronization and error handling using Axios and fetch, enhancing data-fetching reliability.
- Implemented client-side state management using Redux and improved debugging efficiency with Redux DevTools, reducing state-related bugs by **40%**.
- Participated in Agile development processes, including daily stand-ups and sprint planning, improving team collaboration and timely delivery of features.
- Created comprehensive documentation for components, workflows, and best practices, improving maintainability and reducing onboarding time for new developers by **20%**.

Technologies

Programming Languages: JavaScript, Nest.js, TypeScript, C++, C, Python, SQL, MongoDB

Libraries, Framework: React.js, Node.js, Next.js,Redux, Chart.js, Express.js, Jest, React Testing Library

CSS Libraries / Frameworks: CSS3, Bootstrap 5, Material UI, Tailwind CSS, Next Ui, Shadcn UI,

Version Control: GitHub, Git, Bitbucket, GitLab

Databases: MongoDB, MySQL, Firebase, Redis, PostgreSql, TypeORM, GraphQl

Projects

One App (Pakistan Government National Identity System)

- **Purpose**: Designed and developed "One App" for NADRA (National Database and Registration Authority), enabling Pakistani citizens to apply for and renew national ID cards entirely from home.

Key Contributions:

- Streamlined access to government services by integrating features like Family Registration Certificate (FRC) validation and real-time form checking.
- Reduced ID application processing time by **40%** and user interaction time by **30%** through process automation and intuitive interfaces.
- Enhanced data accuracy and security using advanced validation mechanisms such as the Family Registration Verification (FRV) tree.

Impact:

- Helped **millions of citizens** save time and effort by enabling fully online applications.
- Increased the application success rate by **30%**, minimizing errors through real-time feedback.
- Provided a scalable, user-friendly platform that improved accessibility for citizens nationwide.

KIOSK-NADRA (Self-Service ID Renewal System)

- Purpose: Developed a centralized kiosk system for NADRA, offering secure, self-service ID renewals and validation at service centers.

Key Contributions:

- Integrated IoT devices for fingerprint-based validation, ensuring secure and authorized access to sensitive workflows.
- Added functionality for **Iris** capture integration, enabling the capture of iris data for future use, enhancing biometric validation and reducing reliance on fingerprints alone.
- Enabled citizens to independently renew IDs and make payments via integrated payment gateways, cutting down on manual assistance.
- Automated validation processes using React and Nest.js, reducing processing times by **50%** and queue lengths by **30%**.

Impact:

- Improved operational efficiency at NADRA centers by **45%**, reducing staff workload.
- Benefited **millions of citizens**, saving an average of **20–30** minutes per visit.
- Enhanced security and convenience, with a **25%** increase in positive user feedback.

EDGE POINT

- **Purpose**: Contributed to automation and analytics platforms for telecom and data centers, improving hardware management and performance tracking.

Key Contributions:

- Designed user-friendly interfaces for AXIN FE, automating hardware site processes across the Philippines and reducing on-site configuration time by **60%**.
- Enhanced real-time analytics for the AQLITE project, adding advanced features like histograms to track hardware uptime/downtime, improving data visibility by **40%**.
- Implemented GraphQL with Apollo Server, increasing data querying efficiency by **25%**, and refined UI design with Tailwind CSS for a cohesive, modern experience.

Impact:

- Reduced operational costs by **30%**, minimizing the need for on-site visits.
- Improved decision-making speed by **50%**, thanks to real-time data and performance metrics.