Shakirul Hasan Khan *Software Engineer*

✉ shakirulhkhan@gmail.com   📞 +8801641186060   📍 Dhaka, Bangladesh   🔗 shakirul.dev

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💼 Professional Experience

Software Engineer, *Ramble* ↗   2023 – present | Remote, United States
- Developed a feature enabling summary generation and conversation with documents, leveraging **Instructor** and **Pydantic** across various **LLMs**.
- Implemented CRUD-based functionalities on a **Flask** server.
- Built a comprehensive web application adhering to **Figma** designs, using **NextJS** and **TypeScript**.
- Written end-to-end tests employing **Playwright** for a **NextJS** application.
- Engineered a sophisticated rich text editor, featuring commenting, mentioning, and highlighting capabilities, utilizing **PlateJS**, enhanced by real-time multi-user editing synchronization through **PubNub**, built with **NextJS** and **TypeScript**.
- Crafted a native-like web application interface with **ReactJS** for integration into a Mac application via web view.

Contract Software Engineer, *Trader's Connect* ↗   2023 – 2024 | Remote, United Kingdom
- Developed the foundational front-end infrastructure for an upcoming large-scale web application.
- Written native modules in **Swift** to seamlessly connect a **React Native** app with a **GRPC** server.
- Crafted a customized and reusable component library in **React Native**, utilizing **styled-components** for a cross-platform mobile application.
- Engineered a cross-platform mobile application featuring over 20 distinct screens using **React Native**.
- Implemented **oAuth** to secure authentication processes within a **React Native** application.

Software Engineer, *Re:cruit* ↗   2022 – 2023 | Remote, United States
- Developed comprehensive test suites for **NextJS** applications utilizing **Jest** and **Playwright**.
- Spearheaded the creation of a full-stack resume-building application with **NextJS**, **TypeScript**, **Prisma**, and **Stitches**, integrating **PostgreSQL** for data storage and **OpenAI API** for content enhancement, with functionality to export resumes as PDFs.
- Engineered a large-scale language corpus testing tool using **Python**, enabling extensive data analysis and system optimization.
- Implemented an authentication system using **MagicLink** and contributed to the design of several web pages for a **DAO**, leveraging **NextJS** to achieve optimal user experience and system security.

Associate Software Engineer, *KAZ Software* ↗   2021 – 2022 | Dhaka, Bangladesh
- Led the design of over 40 pages for a complex web application, catering to two distinct user interfaces with the use of **ReactJS**, **Typescript**, **SWR**, **Redux-Toolkit**, **RSuite**, and **SCSS**. Successfully integrated these with a **REST API** backend.
- Successfully upgraded two web applications from **ReactJS** version 16 to version 18, enhancing performance and compatibility.
- Merged four separate **ReactJS** applications into a unified **micro-frontend** platform using **Single-SPA**, and further improved deployment efficiency by containerizing with **Docker**.
- Authored end-to-end automated tests for a **ReactJS** web application utilizing **Cypress**.
- Engineered and implemented a range of features across two **ReactJS** web applications, employing **Typescript** for development.

🎓 Education

B.Sc. (Engg.) in Software Engineering,   2018 – 2022 | Sylhet, Bangladesh
Shahjalal University of Science and Technology ↗

🧠 Skills

Proficient
NextJS, ReactJS, Typescript, Python Git, Github, ExpressJS, PostgreSQL, Docker

Others
Flask, React Native, Google Cloud, AWS, MongoDB, Tensorflow, Pandas, Java, Rust

📖 Publications

BnPC: A Gold Standard Corpus for Paraphrase Detection in Bangla, and its Evaluation, *ELRA and ICCL*   05/2024
- Introduced benchmark dataset for Bangla paraphrase detection with 8,787 human-annotated sentence pairs from 23 newspaper headlines, filling a research gap.
- Achieved highest weighted-F1 score of 87.91 with fine-tuned BanglaBERT; GPT-3.5 showed strong performance in zero-shot and few-shot settings.
- Demonstrated good generalization through cross-dataset analysis.
- Made dataset and code publicly available.