Aditya Chakma

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Linked-in Github Kaggle Portfolio

SUMMARY

3.5+ years of Software Engineering experience and specialized in developing and managing complex projects, especially in healthcare and EVV (Electronic Visit Validation) systems. Worked in a team of 50+ members and led some core projects, delivering high-quality results. Strong experience in code review, cross-team development, mentoring, ensuring compliance with accessibility, and efficient project delivery using Scrum practices. I aim to build secure, reliable, scalable, and robust systems.

PROFESSIONAL EXPERIENCE

Therap (BD) Ltd. ***March 2021 - Present***
Software Engineer II(April 2024 - Present), Software Engineer(March 2022, - April 2024), Associate Software Engineer (March 2021 - March 2022) Dhaka, Bangladesh

- Developed and maintained a large SaaS application **(therapservices.net)** with 20+ state contracts. The application has 30,000+ active users and serves over 500,000+ individuals
- Worked on a team of 50+ individuals and maintained core system functionalities, including login, EVV (Electronic Visit Validation), Scheduling (Google calendar-like), and SComm (Gmail-like secure messaging feature)
- Led critical projects such as Salesforce live chat integration in Therap System and automated chat import process from third party system using RestAPI
- Architected and redesigned third-party API endpoints, reducing API calls by 50%. Developed several RestAPIs for multiple existing modules for supporting cross-platform development, including mobile platforms and IOT
- Desinged and Developed Webhook from scratch for Therap's aggregator application to provide system-to-system communication
- Worked on HIPAA-compliant (Health Insurance Portability and Accountability Act) healthcare projects handling PHI (Protected Health Information) data. Delivered state-specific solutions for Kentucky and Tennessee, implemented rollup-dashboard and contributed to meet 21st Century Cures Act mandated by the Federal Government, which helped Therap to secure multi-million dollar state contracts
- Load tested server APIs using Gatling and optimized endpoints improving performance by a factor of up to 9x to handle 100+ requests per second
- Optimized on-demand loading for js scripts across the system, reducing network consumption by 20%
- Optimized most-frequent cron job DB queries and gained performance up to $5x$ times
- Was involved in dev and QA side server deployment
- Working on **Webhook, Message queue, Push notifications, RESTful APIs, Spring Security, REACT, Spring Core, Servlet, Hibernate, JDBC, Mysql, Git, Java, Javascript, Gatling, Postman, and jQuery**

SKILLS

Programming Languages: Java, Python, C, C++, C#, JavaScript, JDBC
Competitive Programming: Solved 500+ data-structure and algorithmic problems on various online judges
Database: Oracle, Mysql, PostgreSQL
Dev-Ops: Nginx, Weblogic, Docker, TomCat
Project Management: Jira, Trello, Agile development, Scrum
Load test: Gatling, Postman
Tools/Frameworks: Shell Scripting, Maven, Gradle, Git, Linux, LaTeX, XRabel, JRabel, JDBC, Hibernate, Spring MVC, Spring Core, Spring Boot, Spring Security, Gatling, Postman
Core competencies: Leadership and cross-team collaboration in an Agile development environment, Problem-solving and optimization, Strong communication skills, Adaptability in a fast-forwarding environment, Mentoring, and Knowledge sharing.

EDUCATION

Bangladesh University of Engineering and Technology (BUET) **July 2021 – Present**
*Masters in CSE - **3.75/4.00*** *Dhaka, Bangladesh*

Mentionable Courses: Network Security, Programming languages and Systems, Advanced Digital Image Processing, Neural networks, Bioinformatics algorithms
Thesis: Handwritten characters recognition and dataset for the Chakma language

Bangladesh University of Engineering and Technology (BUET) **February 2016 – February 2021**
*Bachelor in CSE - **3.30/4.00*** *Dhaka, Bangladesh*

Mentionable Courses: Data Structures and Algorithms I & II, Operating System, Computer Security, High-Performance Database systems, Artificial Intelligence, Pattern Recognition, Machine Learning
Thesis: Study of Spanning Trees with Maximum Number of Leaves

RESEARCH EXPERIENCE

Handwritten characters recognition and dataset for the Chakma language
March 2020–Present

- The chakma language is an endangered language declared by UNESCO
- Provided a novel multipurpose dataset and working on a GAN based baseline model. Also provided a linguistic analysis, which revealed homoglyph characters and connectivity between consonants forming second-order conjuncts
- Collected 113,834 handwritten characters and obtained 98% macro averaged accuracy with state-of-the-art CNN models on test data, whereas the exact match accuracy was 94%

Multilingual machine translation for Chakma language
August 2021 – Present

- Provided a novel monolingual and bilingual corpus dataset consisting of 13,000 sentences. Collected data from old documents and crowd-sourcing.
- Experimented with NMT, SMT models, and various vanilla MT models. Due to low resources, translation did not work well. Pretraind BanglaT5 with transliteration significantly boosted the result

LANGUAGES

- Bengali (Native)
- English (TOEFL Score of 99/120)