

# ADITYA CHAKMA

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## 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.

Software Engineer II

Dhaka, Bangladesh

March 2021 - Present

- 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 load by 50%. Developed several RestAPIs for multiple existing modules for supporting cross-platform development, including mobile platforms and IOT
- Designed and developed a Webhook from scratch for Therap's aggregator application, enabling system-to-system communication with Therap suite and improving data integration
- Worked on HIPAA-compliant healthcare projects handling PHI data, delivering state-specific solutions for Kentucky and Tennessee. Implemented rollout-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 JavaScripts across the system, reducing network consumption by 20%
- Optimized most-frequent cron job DB queries and improving performance by 5x and optimized DB I/O for a particular frequently accessed module by a factor of 25x by using Oracle Coherence and write-back method
- Was involved in dev and QA side server deployment using Weblogic, Nginx, XRebel, JRebel and Apache Tomcat, ensuring stable and efficient system performance
- **Tech stack:** RESTful APIs, Spring Security, REACT, Spring Core, Servlet, Hibernate, JDBC, Mysql, Git, Java, Javascript, jQuery, JSP, HTML, CSS, PrimeFaces, Gatling, Postman, and Linux

## 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, L<sup>A</sup>T<sub>E</sub>X, 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)

Masters in CSE - 3.75/4.00

July 2021 – Present

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)

Bachelor in CSE - 3.30/4.00

February 2016 – February 2021

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

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### 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. Pretrained BanglaT5 with transliteration significantly boosted the result

## LANGUAGES

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