

# Abu Raihan

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## EXPERIENCE

Feb 2020 - July 2020	Noon Academy	Software Development Engineer (Backend)
June 2019 - Jan 2020	Noon Academy	Software Trainee (Backend)

## PROJECTS

### User Activity Logger

Developed from scratch a service for logging user activities such as log in, log out, enter/exit group/sessions/tasks, etc. Used heartbeat for last active status tracking. This data was used by different clients for different use cases like for recommendations. Used Spring boot for the backend service and ScyllaDB for database.

### User Onboarding and Verification Flow

Developed OTP flow for user onboarding and verification. Also worked on linking users logged in through social login, to their original account. The micro-services were written in NodeJS and Spring Boot. Mysql was used for data storage.

### User Contacts Based Group Recommendations

Developed flow for uploading valid user contacts from the user's device to the database. Also developed a discovery api for suggesting groups to the user based on the contacts already enrolled into different groups. Used Spring Boot and NodeJs for backend and Kafka for asynchronously uploading the user data to the database.

### User Groups Service

Contributed in migration and development of user groups service. Teachers can create groups and upload lecture sessions, students can join the group for studies. Migrated old group ids from alphanumeric to numeric as per the new system requirements. Written a transformation layer to prevent failure due to the migration. Optimized some frequently hit apis by modifying the database queries. Tech used: Spring boot, NodeJS, MySQL, MongoDB.

### User Service

Developed flow for adding roles (teacher, student, etc) to the users. Worked on converting user types from guest user to registered user after onboarding. Also worked on linking devices to respective users. Used NodeJS for the development.

### New Curriculum Based Support

Developed apis in different services related to Library (questions, books and flashcards etc) to support a new type of curriculum. Earlier only school based curriculum was supported. Now it supports universities, test preparation, skills and boards etc.

### Other Projects

- Implemented version based notifications to users. This enabled us to send notifications only for activities that are applicable for the user's current version of mobile app.

- Integrated Noon Cast (internal communication service) with Cequens (sms service provider) for sending sms based notifications to users.

## MAJOR COLLEGE PROJECTS

### Doodle Based Graphical Authentication Scheme Using Image (M Tech Final Year)

Proposed a cued recall based graphical password scheme using Free-Form Doodles to increase security password space usability. Used Java and openCV library.

### Waste Detection System for Smart City

An advanced waste detection process based on image processing integrated with a fixed camera has been introduced to detect the bin level of the waste.

### Inventory Management System for College

A web application to manage the items, inventory, supplier, sales, and purchase order etc. This project was implemented in php and MySQL.

### Image search engine

A Content Based Image Retrieval system which can search for images similar to a query image. This project was implemented in JAVA.

### BT Power

Android application to display the Powerpoint presentation stored on a mobile to a computer as a projector using bluetooth connectivity.

## EDUCATION

Qualification	Board/University	CGPA	Year
M Tech (Software Engineering)	ZHCET, AMU, Aligarh	8.30	2018
B Tech (Computer Engineering)	ZHCET, AMU, Aligarh	8.08	2016

## SKILLS

Programming languages	Java, Node.js, C, C++
Frameworks and Tools	Spring Boot, MySql,Redis, MongoDB, ScyllaDB, Git, OpenCV
Area of Interest	Algorithms, Data Structure, Micro Services, Distributed Systems, RESTful Web Services, Image Processing

## PUBLICATIONS

- Raihan A., Haque M.A., Khalidi M.D. **BTpower: An Application for Remote Controlling PowerPoint Presentation Through Smartphone.** Advances in Computer and Computational Sciences. vol 553, 2017. Springer, Singapore

## ACTIVITIES AND INTEREST

- Solving Logical and Mathematical Puzzles
- Playing Badminton, Football