

# Mohammad Zahirul Islam

## Software Engineer

📍 Dhaka, Bangladesh  
✉ [md.zahir25@gmail.com](mailto:md.zahir25@gmail.com)  
🌐 [krittimanush.com](http://krittimanush.com)  
🐙 [github.com/mzislam25](https://github.com/mzislam25)

## Work Experiences

### Software Engineer

Mar 2020 - Present

#### Embedded Logic Operations (ELO)

- Scalable and maintainable backend development using JavaScript/TypeScript.
- Design, develop, troubleshoot, debug, test, and ensure API compatibility.
- Writing clean and maintainable code.
- Server-based application development using the functional databases on the back end along with AWS Cognito/S3/EC2/ECR/Lambda/Route53.
- Ensure cross-platform optimization for mobile applications using cloud functions for firebase.
- Automate deployment within the software development life cycle using Github Actions.
- Medium-scale ERP application development using Nestjs, GraphQL, PostgreSQL and Refine.

### Research Assistant

Dec 2018 - Dec 2019

#### Department of CSE, BRAC University

- Conduct research on multi-disciplinary rescue robots in collaboration with ICT Division.
- Work on socket-based rover communication software using python socket module.
- Development of custom software-serial-based rover control application.

### Freelance Developer

Aug 2017 - Present

- Strong experience in RESTful web service development using Express.js/NestJS/Laravel/CodeIgniter.
- Basic Knowledge of Server/cPanel/Hosting.
- Very good understanding of Responsive Web Design/Admin Panel with Bootstrap.
- Full e-commerce & web development along with complex large scale website using tools like JavaScript, Laravel, Payment Gateways, Bootstrap, PHP, jQuery, JSON, AJAX, etc.
- Desktop Application Using Java SE with SQLite/MySQL.

## Programming Skills

**Programming Language:** Java, PHP, SQL, JavaScript, Python.

**Framework & Tools:** Node.js, Express.js, NestJS, GraphQL, Codeigniter, Laravel.

**Database & Server:** MongoDB, Proficient with Apache and MySQL, PostgreSQL, Cloud Functions for Firebase, AWS Components: S3, EC2, Cognito, SES, SNS, Route53, ECR, Lambda, API Gateway.

**Version Control:** Git & Github, Bitbucket.

**Others:** HTML & CSS, Photoshop, Android Application.

## Education

### BSc in Computer Science & Engineering

2014 - 2018

#### BRAC University

**Thesis:** Self Driving Car: A Step to the Future of Mobility. (grade: 4/4)

## Portfolio

---

**Sales & Inventory Management System** - Manage distributor, category, products, orders, generate reports (excel, pdf) to admin. Created using Codeigniter, Ajax, jQuery Data tables plugin, Bootstrap Library, and MySQL Database.

**Noteit-Online text editor** - Fullstack app created with Mongo, React and Express, access control using Passport.

**Cere6rum-Memory game** - Fully functional application using Vanilla JS.

**ERP application** - Built using Laravel 5.4 framework.

**MyBikeReviews** - Codeigniter-based affiliate website, customized content management system.

**Reflection** - Core PHP-based central image uploading system with authentication.

**Fusion** - PHP-based vehicle activities monitoring system integrated with the hardware device.

**Scraping Tool** - PHP-based scraping tool for affiliate marketing.

**Krittimmannush** - portfolio website designed and built using HTML, CSS, and JavaScript.

### Others:

Schema-based multitenancy with NestJS, TypeORM and PostgreSQL.

Reusable nestjs package for faunadb connection.

## Publications

---

- *An IoT Based Interactive LPG Cylinder Monitoring System with Sensor Node Based Safety Protocol for Developing Countries*; Ali Ahsan, **Mohammad Zahirul Islam**, Rumali Siddiqua, Md. Khalilur Rhaman. **IEEE Xplore**: 02 November 2020 [[Link](#)]
- *Automated Self Driving Car Following Lane with Emergency Braking System*; Riham Chowdhury, **Zahirul Islam**, Stanley Dip Rozario, Zaber Mohammad, Maria Islam Ema. International Conference on Computing Advancements (ICCA 2020). [[Link](#)]
- *A Semi-Autonomous Tracked Robot Detection of Gun and Human Movement Using Haar Cascade Classifier for Military Application*; **Mohammad Zahirul Islam**, Ali Ahsan, Ratul Acharjee. IEEE Xplore: 02 January 2020 [[Link](#)]

## Other Activities

---

### Technical Lead

2021 - 2022

#### AI-based disaster risk reduction DRR AI

- AI system to provide alerts on various disasters such as - fire incidents and waterlogging in the context of Bangladeshi slum areas.
- funded by European Union Civil Protection, Humanitarian Aid as well as Action Aid

### Team Lead

2017 - 2018

#### BRAC University Mars Rover Development Team.

- a next-generation Mars rover that will one day work alongside human explorers on the red planet.
- University Rover Challenge 2018, Indian Rover Challenge 2018

### Executive

2014 - 2016

#### ROBU

Robotics Club of BRAC University.