

## Research Interest

**Computer Vision, Distributed Systems, Artificial Intelligence**

## Education

**Khulna University of Engineering & Technology**

B.Sc in Computer Science and Engineering

CGPA: 3.06/4.00 (CGPA of last 2 years : 3.32)

**Khulna, Bangladesh**

April, 2014-March, 2018

## Research Experience

### A Study on Salient Region Detection Using Boundary and Color Cue

- This thesis work proposes a technique that detects and extracts the visually salient region from images.
- It generates superpixels followed by a global contrast map, a boundary aware contrast map, and a color map to build the visual saliency map.

## Professional Experience

### Senior Software Engineer

**Sigma Solutions, Dhaka, Bangladesh**

**March, 2019 - Present**

- Developed tools to automate radio and core parts of the telecommunication system for leading telecommunication companies in Bangladesh.
- Developed and worked as a maintainer for multiple packages (robi-equipment-inventory, laravel-mysql-partition, sigma-db-helper, sigma-package-linker, sigma-table, sigma-sheets).
- Refactored codebase and Developed modules for a leading stock photo market to fulfill business requirements.

### Software Engineer

**Hyper Systems Ltd., Dhaka, Bangladesh**

**May, 2018 - February, 2019**

- Worked in Collaboration with the product design team to build operations management and customer care modules with laravel and vuejs.
- Improved overall product performance by minimizing refuel event errors.

## Projects

- **Tower Touch.** An application which performs a thorough real time status checking of ericsson and huawei telecom tower sites. It reduces human efforts by 90%.
  - Designed architecture in collaboration with another team member. Lead a team of 3 members to develop modules regarding concurrency, real time progress update and command response parsing rules.

**Technologies:** *Laravel, Livewire, Python, FastApi*

- **Pixmama.** Pixmama is the largest stock photo platform in bangladesh. Here professional-grade photographs are bought and sold for a range of purposes, sizes and licenses.
  - Implemented APIs, payment gateway, designed ui, and restructured frontend modules.

**Technologies:** *Laravel, AngularJs, JQuery, Mysql, Elasticsearch*

- **myRADAR.** myRADAR is a leading GPS based vehicle tracking system which includes features like live tracking, trip history, destination alert, remote engine lock unlock, fuel monitor.
  - Increased refuel detection event efficiency by 50%. Performed R&D to improve data communication technique between IOT devices and server. It reduced packet size by 70%.

**Technologies:** *Laravel, MySQL, JQuery, Vanilla js, vue.js*

- **DNA Protein Sequence Visualizer.** A visualizer of DNA and Protein sequence to help physicians find the hot spot by comparing the sequence of a cancer patient with a healthy person.

**Technologies:** *D3.js, Vanilla js*

- **Automated user management system.** A tool to automate a ui based user management system for Robi, second largest telecom service provider in Bangladesh.

→ Designed architecture and Lead a team of 4 members to develop and ensure on time product delivery.

*Technologies: Laravel, php-webdriver*

#### Language Proficiency

---

- **English.** Fluent ( IELTS Scores: **Overall: 8**; Speaking: 7, Listening: 8.5, Writing: 6.5, Reading: 9 )
- **Bengali.** Native

#### Skills

---

- **PHP, JavaScript,** Python, C, C++, HTML, CSS, SQL.
- Frameworks: **Laravel**, Vue.js, jQuery, FastApi, Flask, **PHPUnit**.
- DBMS: **MySQL**, SQLite, MongoDB
- Tools: Git, redis, IntelliJ, Vim, Jira, Clickup.
- Libraries: **OpenCV, OpenGL**, D3.js.
- Solved **400+** problems on different online judges.

#### Additional Experience

---

- **Mentor**, National High School Programming Contest (NHSPC) (2016, 2017) Khulna.
- **Mentor**, SGIPC (Standard group of interested in programming contests).
- **Program coordinator**, Workshop on “University-Industry Collaboration: Challenges and Opportunities 2017”.
- **Cocreator**, **Ngx light color picker**, an open source lightweight color picker package built with angularjs.

#### References

---

##### **Dr. Sk. Mohammad Masudul Ahsan**

Professor

Department of Computer Science & Engineering  
Khulna University of Engineering & Technology (KUET)  
Khulna-9203, Bangladesh.

Email : smahsan@cse.kuet.ac.bd

Website : www.kuet.ac.bd/cse/smmasudul/

##### **Dr. Bishnu Sarker**

Assistant Professor

Department of Computer Science and Data Science,  
Meharry Medical College,  
Nashville, Tennessee, United States

Email: bsarker@mmc.edu

Website: sacsmeaharry.org/sacs/faculty/bishnusarker/