

Abrar Fahim

Final Year Undergraduate Computer Science Student

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EDUCATION

Bangladesh University of Engineering and Technology (BUET)
Dhaka, Bangladesh — *BSc in Computer Science and Engineering*

Feb 2017 - Present

- Top Engineering University in Bangladesh (CS acceptance rate: ~ 2.5%)
- Current CGPA: **3.71**, Major CGPA: **3.91** | Expected Completion Date: **Apr 2022**

EXPERIENCE

Free Pixel Games Ltd Dhaka, Bangladesh — Junior Software Engineer

Dec 2020 - Jul 2021 (8 months)

- Created and deployed **web app** to process and serve data to analysts, writing **complex SQL queries** to generate **reports** based on **input parameters**
- Reduced company database (containing millions of records) access times from **minutes** to **seconds** by **pinging** the database for results, maintaining client states in backend, and by **caching** third-party API data into company database
- Improved visuals of **3 games** with graphics team using **custom shaders** in **Unity Editor**, a technology never explored by the company before

Fashion E-Commerce Dhaka, Bangladesh — Front End Developer

May 2020 - Dec 2020 (8 months)

- Designed UI and created cross-platform app in **React Native**
- Built front end of customer and seller websites, both using **Angular 2** and **PrimeNG**

PROJECTS

Similarity Search in High Dimensional Datasets — *Thesis Topic* Present

- Created custom **loss function** in **PyTorch** and made it run in under **4GB GPU memory** for ~ **1000 dimensional** datasets with **millions of points**
- Beat baseline approach's supervised learning results by at least **5-10%** using **unsupervised learning** with **boosting** and an **ensemble** of 2 models

Alfred — *Messenger bot for workplace collaboration* Mar 2020

- Conceptualized the idea to create a personalized HR manager for employees
- Led a team of **three** and did complete **requirements analysis**
- Created conversation flows for all use cases and trained basic NLP using **wit.ai**

C to 8086 Assembly Code Generator Jul 2019

- Wrote lexical analyzer in **Flex**, parser in **Bison**, and compiler logic in **C++**
- Did basic peephole optimization to remove redundant memory operations
- Supports function calls with call stack, variables, arrays, and basic C operations.

Megaman — *Two player fighting game* Mar 2018

- Made **animations** using **sprites**, coded **game physics**, handled **networking** between two players for real-time matches all from scratch using **Java** and **JavaFX**

COURSEWORK

Object-Oriented Programming,
Data Structures and Algorithms,
Database, Compilers, Networking,
Computer Architecture, Artificial
Intelligence, Operating Systems,
Software Development

SKILLS

Programming Languages

PROFICIENT

C | C++ | Java | Javascript |

HTML | CSS

BASIC

Python | Go

Frameworks and Tools

PROFICIENT

React.js | React Native | Angular

| MySQL | Pytorch | Unity

BASIC

Git | MongoDB | Flex and Bison

| Assembly | Bash

ACHIEVEMENTS

2021 - Google Hash Code 17th
in Bangladesh / 72 local teams

2020 - Google Hash Code 17th
in Bangladesh / 83 local teams

**2016 - Elected President of
Student Council in High School**
Led and managed a team of
approximately 50 prefects and
organized main school events

**2015, 2016 -Outstanding
Cambridge Learner Awards**
Scored highest marks in the
UAE in AS and A level exams in
Math, Physics, Chemistry, and
Biology