

Industrial Workshop Report



International Islamic University Chittagong
Dept. of Computer Science & Engineering

Student Name: Nusrat Enam
ID: C181225

Submitted to

**Industrial Training, Collaboration, Attachment, and Placement Committee
(ITCAP)**

**This report is submitted for the partial fulfillment of the Course
CSE-4708 (Fieldwork)**

2 August, 2022

Declaration

I, hereby declare that except where specific reference is made to the work of others, the contents of this report are original and have not been submitted in whole or in part for consideration for any other degree or qualification in this, or any other university.

Nusrat Enam

C181225

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Acknowledgement

Firstly I am grateful to my Allah(SWT). I am thankful to my parents, IIUC and the host as I got the opportunity of Industrial Workshop.

Abstract

The industrial training aims to provide knowledge about practical training of different applications in particular time frames. It integrates a fundamental component to improve the key ability needed to improve the student's capacity to work in the job field. It gives the student knowledge and encourages them to be successful. Moreover, it guides them to choose career option with various work environments that best suit them. They are made aware of the latest technologies that are used by many companies. This program helps graduates to have better knowledge about work and experience.

Some of the objectives of industrial training are:

- To make them able to work with new software applications
- To develop confidence and spirit in a student
- To teach students about skills required in particular application
- To encourage and motivate them to work
- To guide students about the steps needed to get a job
- To develop skills in working with a team

At the end of this program, students will have confidence to work in new platforms and are aware of the steps that are needed to become a successful engineer.

Main Report

Section 1: Introduction

Industrial workshop aims for the graduates to provide them with knowledge and introduce to them the latest technologies are used. It brings the students and professionals from many reputed companies for a specific period of time. They exchange knowledge and experiences with the graduates/under graduates guiding them to become a successful engineer. It builds confidence in a student's life and guides students who are ready to face professional work life. The training program provides many IT and program related knowledge.

Section 2: Profile of the Industry

BracIT

It's a community of designers, engineers, researchers and more. It shared values and beliefs influence the work that they do, and the impact they want to achieve and pursue purposeful innovation to deliver great experience. Their mission is to ensure customer happiness through.

Mr. Asif Saleh, is the **Executive Director** of BRAC Bangladesh. He brings with him a diverse multi-sectoral experience in senior leadership roles in private, public and non-government sectors, with a proven track record of effectively managing interfaces of development programming, operational human centered approach, future proof technology and best practices and financial sustainability and building effective partnerships, both within and outside BRAC.

Mr. Arinjoy Dhar, is the **Director** of BRAC IT. He has diverse and extensive experience & **Mr. Selim R. F. Hussain** joined BRAC Bank Limited as the **Managing Director & CEO** on November 8, 2015.

*Website: <https://www.bracits.com/>

Section 3: Profile of Resource Person:

1. Md. Minhajul Abedin

Chief Technology Officer

2. Maliha Samshad

Head Business Analysis

3. Md. Saiful Islam Masuk

Technical Lead, Software Engineering

4. Mohammad Asif Atick

Consultant

5. Mohammad Kafil Uddin

Software Engineer

6. A. K. Sabbir Mahbub

Chief Executive Officer

Section 4: Session-1 Workshop

This session of workshop was conducted by:

Mohammad Asif Atick

Consultant

BRAC IT Services Limited

Topic: Workshop on Object Detection with YOLOv5

It is a novel convolutional neural network (CNN) that detects objects in real-time with great accuracy. This approach uses a single neural network to process the entire picture, then separates it into parts and predicts bounding boxes and probabilities for each component.

YOLOv5, the latest release of the YOLO family is a group of compound-scaled object detection models trained on the COCO dataset used for model ensemble (combining multiple models in the prediction process), Test Time Augmentation (performing random modifications to the test images like flipping, rotating, etc.) and hyper parameter evolution (optimizing hyper-parameters using a genetic algorithm for optimization).

Here instructor at first shared some experiences about his working life. Then he introduced us about YOLOv5 which is a family of compound-scaled object detection models trained on datasets. It's a framework. We did lab works on that on Google Colab.

After installing some requirements we run the code & it was great to know learn that how an object can be easily recognized. There were some pictures for demo like apples , dogs with girl & so on ; here YOLOv5 model easily detected with some boundaries ; some pixels were so vivid and some were not but still it could detect. <https://docs.roboflow.com/> from here we can download datasets which instructor has suggested. How to increase and decrease threshold values according to pictures means to optimize the model, we can learn from here.

After this workshop I got interested on image detection process.

Section 5: Session-2 Workshop

This session of workshop was conducted by:

Md. Minhajul Abedin
Chief Technology Officer
BRAC IT Services Limited

Topic: Workshop on Spring Boot

Here we learned about Spring Boot. It makes it easy to create stand-alone, production-grade Spring based Applications that you can "just run".

The instructor discussed -

- Java jar from within CGI script
- Servlet
- WAR (like zip)-use on the server side
- Maven-(for compiling code).
- The most popular build tools for Java Maven reads pom.xml, then makes a WAR file.

Section 6: Career Seminar:

From seminar our speakers firstly talked about the required skills for a software engineering-

Hard Skills	Soft Skills
<ul style="list-style-type: none">• Front-end and back-end coding knowledge• How to write clean code with clear comments• Understanding of agile development• Software Refactoring	<ul style="list-style-type: none">• Communication• Time Management• Team collaboration

Those skills should be needed otherwise it might get difficult to get a proper job as a Software Engineer. Again we learned to write a CV, how to prepare ourselves for job, technical questions, why we want to work in software sector.

Section 7: Things I have learned:

I was able to know about Google Colab and Visual Studio Code.

I learned many new things within python and java.

I have learned about **YOLOv5** and **Spring Boot** those are new for me.

Section 10: Career preparation

I learned about some fundamentals works of new framework, I learnt how to plan for my professional life. I now understand how to get prepare for an interview. I got interested about java in this workshop. They all gave us strength for women in the field of engineering.

Section 9: Key points

Using the key points,

- I have done my CV.
- I am now focusing on my engineering skills.
- And I am learning about the programming skills that I had some lacking.

Section 10: Suggestions:

Workshop is very important, anyone can learn about practical works from here which they might face in future.

Section 11:

CURRICULUM VITAE

Nusrat Enam Fairin

Contact No: 01948864405

E-mail: nusrat.enam@yahoo.com

CAREER OBJECTIVE

To obtain a position with opportunities to utilize my technical skills, talent, creativity, sincerity for the better achievement of the organization.

ICT QUALIFICATION

Programming Language : C, C++, Python, Java, CSS, HTML
Software : Android Studio, Anaconda , Arduino IDE , Proteus
Operating System : Windows (XP/ Windows 7, 8, 10)
Microsoft office package : MS Word, MS Excel, MS PowerPoint

EDUCATIONAL QUALIFICATION

Bachelor of Computer Science and Engineering (B.sc in CSE)

University : International Islamic University, Chittagong
Session : Spring 2018 to Autumn 2021
Result : CGPA 3.59

Higher Secondary School Certificate

Group : Science

College : Sheikh Khalifa Bin Zayed Bangladesh Islamia School & College

Board : Dhaka

Passing Year : 2017

Result : GPA 4.58 Out of 5.00

Secondary School Certificate

Group : Science

School : Sheikh Khalifa Bin Zayed Bangladesh Islamia School & College

Board : Dhaka

Passing Year : 2015

Result : GPA 5.00 Out of 5.00

LANGUAGE PROFICIENCY

Language	Reading	Writing	Listening	Speaking
Bengali	Excellent	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent	Excellent

PERSONAL INFORMATION

Full name : Nusrat Enam Fairin

Father's Name : Mohammad Enamul Hoque

Mother's Name : Kamrunnesa Khanam

Date of Birth : 10th April 1998

Marital Status : Unmarried

Religion : Islam

Present Address : Khulshi Abashik, Khulshi, Chittagong

Permanent Address : Chunti, Lohagara, Chittagong.

References

*<https://www.thymeleaf.org>

[Introduction to YOLOv5 Object Detection with Tutorial - MLK - Machine Learning Knowledge](#)