

# KHANDAKAR AMIR HOSSAIN

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## WORK EXPERIENCE ( 2 years 9 months )

### IoT Software Engineer:

#### Nybbles Systems Limited (NybSys Pvt. Ltd.)

📅 1<sup>st</sup> Aug 2020 - Present (2 years 4 months)

- Working with IoT team in developing clean code for embedded linux
- R&D on performance improvement for different IoT Gateway products
- Learning sensor data harvesting and protocol mechanisms

### IoT Intern:

#### Nybbles Systems Limited (NybSys Pvt. Ltd.)

📅 1<sup>st</sup> March 2020 - 31<sup>st</sup> July 2020 (5 months)

- Worked with the IoT team in implementing & testing new features
- Upgraded existing firmware with some really cool features
- Developed automation tools and GUI to enhance productivity for some boring repetitive tasks.

## LEARNING & CERTIFICATIONS

### • Python for Data Science and AI: [View](#)

An online course organized by **IBM** and offered through **coursera**.

### • Mathematics for Machine Learning: [View](#)

An online specialization ( 3 courses) organized by **Imperial College London** and offered through **coursera**.

1. **Linear Algebra.** [View](#)
2. **Multivariate Calculus.** [View](#)
3. **Principle Component Analysis(PCA).** [View](#)

### • IBM AI Engineering : [View](#)

An online non-credit professional training (6 courses) organized by **IBM** and offered through **coursera**.

1. Machine Learning with Python. [View](#)
2. Scalable Machine Learning on Big Data using Apache Spark. [View](#)
3. Introduction to Deep Learning & Neural Network with Keras. [View](#)
4. Deep Neural Networks with PyTorch. [View](#)
5. Building Deep Learning Models with TensorFlow. [View](#)
6. AI Capstone Project with Deep Learning. [View](#)

## HANDSON TECHNOLOGIES

Development Boards: **Jetson Tx2/Nano, Raspberry Pi 2/3/4 , STM32MP157C, OpenMV, Esp-32/8266, Arduino Uno, Arduino Mega 2560, STM32F103C8T6, SIM800L, SIM5300E**

Software Tools & IDE: **Eagle, Proteous, EasyEda, Circuit Maker, Keil, STM32CubeIDE, VS Code, Spyder, Arduino IDE,**

FrameWorks: **FreeRTOS**

## REMARKABLE PROJECTS

### • NybSys LMR Gateway ( NS\_LMRG100 ) [View IWCE Expo 2021](#)

Designed, Developed, Tested & Deployed NS\_LMRG100. [View Demo 2](#)

### • NybSys Smart Poultry Farm Automation. [View](#)

Developed, tested & Deployed NSPF100 gateway & sensor nodes

### • NybSys Water ATM ( B2B for Drink Well ) [View](#)

Upgraded the existing firmware to Version 3.1 & added new features

### • NybSys IoT Gateway ( IG100 ) [View](#)

Upgraded the existing firmware to Version 2.1 & added new features

### • NybSys Sentra Dispatch to Multicast Gateway ( BackEnd Tool )

Developed & Tested the tool that will run in the backend for scalability.

### • Weapon (Gun) Detection and Elimination

For jewelry Shops and Bank Security :(Using ML & IoT) [View](#)

### • Bank Loan approval decision prediction (data model): [View](#)

[N.B: Dataset was taken from kaggle and assigned to us by my Supervisor **Dr. Bikash Chandra Singh.**]

## EDUCATION

### M.Sc(Engg) in ICT [3<sup>rd</sup> Semester > ]

#### Islamic University, Bangladesh.

📅 2020 - 2022 Expected **CGPA: 3.25/4.00**

### B.Sc(Hons) in ICT

#### Islamic University, Bangladesh.

📅 2016 - 2020 **CGPA: 3.31/4.00**

### Higher Secondary School Certificate

#### Dinajpur Government College

📅 2013 - 2015 **GPA: 4.83/5.00**

### Secondary School Certificate

#### Maharaja Girijanath High School

📅 2011 - 2013 **GPA: 5.00/5.00**

## PROGRAMMING SKILLS

Languages: **Python3**, NodeJS , React,**C,C++ Embedded C**, Java,Bash-Linux Shell Scripting.

Machine Learning: **Numpy, Pandas, PyTorch**

**Tensorflow, Scikit-Learn, SciPy, matplotlib**

**OpenCV, Apache Spark, Keras.**

Network Programming: **TCP/UDP, MQTT, RTP**

Web FrameWork: **Django**

Scalability&Deployment: **Docker, Unicorn**

Database: **MySQL, PostgreSQL, SQLite3**

ML Algorithms: Statistical Modeling,**SVM,**

**Neural Networks,Classification,Clustering**

Generative Adversarial Networks(GAN).

## SOFTWARE SKILLS

• **Class , ER & Sequence Diagram generation.**

• **S O L I D design patterns in practice.**

• **Object Oriented Programming.**

• **Clean & Standard Coding Practices.**

• **Multi Processing/ Threading.**

• **Event Handling.**

• **Inter Process Communication.**

• **Repetitive Task Automation.**

• **Dead Lock Prevention Precautions.**

• **Distributed Version Control with Git.**

## PASSIONATE ABOUT

I want to play with cutting edge technologies and deploy my knowledge in building reliable solutions that will add value to the global economy by enhancing comfortability in our daily life.

## REFERENCES

### Moshtaq Ahmed

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### Dr. Paresh Chandra Barman.

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### Dr. Bikash Chandra Singh.

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