# KHANDAKAR AMIR HOSSAIN

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## WORK EXPERIENCE ( 3 years )

### IoT Software Engineer:
**Nybbles Systems Limited (NybSys Pvt. Ltd.)**
🗓 1st Aug 2020 – Present (2 years 7 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 different protocol mechanisms

### IoT Intern:
**Nybbles Systems Limited (NybSys Pvt. Ltd.)**
🗓 1st March 2020 – 31st 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 bowring 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

- Thesis Paper "**Relative comparison between different machine learning algorithms for criminal offense detection and immediate response on the event using intelligent IoT devices** "
  -- Under development and continuous review.
- **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 jewellery Shops and Bank Security :(Using ML & IoT)** View

## EDUCATION

M.Sc.Eng. in ICT [ Thesis On Going ]
[Tentative Completion–August 2023]
**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**, **Gunicorn**
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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