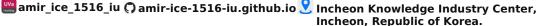
# KHANDAKAR AMIR HOSSAIN

Mamirkhondokar@gmail.com in khondokaramirhossain





+8201097349211



CGPA: 3.24/4.00

# WORK EXPERIENCE ( 5 years )

## Chief Researcher:

Sanion Co Ltd. (South Korea)

- $\blacksquare$  13<sup>th</sup> Nov 2023 Present (  $\sim$ 2 year )
- Working with R&D team in developing clean code for Embedded Linux
- R&D on performance improvement of IEC61850-9-2 on Merging Unit
- Learning different protocols for substation automation devices(IED,MU)

IoT Intern-->Jr IoT Software Engineer-->IoT Software Engineer: Nybbles Systems Limited (NybSys Pvt. Ltd. - Bangladesh)

- 1<sup>st</sup> March 2020 31<sup>st</sup> October 2023 (~4 years)
- Worked with IoT team in developing clean code for Embedded Linux
- R&D on performance improvement for different IoT Gateway products
- Learned sensor data harvesting and different protocol mechanisms
- Upgraded existing firmware with some sequrity issue and major bug fix
- Developed automation tools and GUI to enhance productivity for some bowring repetitive tasks.

# LEARNING & CERTIFICATIONS

- Python for Data Science and Al: 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. Al Capstone Project with Deep Learning. View

### HANDSON TECHNOLOGIES

Chips/Socs/Boards: Jetson Tx2/Nano, Raspberry Pi 2/3/4, STM32MP157C, Esp-32/8266, Arduino Uno, Zynq7020(FPGA) . Repetitive Task Automation. Arduino Mega 2560, STM32F103C8T6, SIM800L, SIM5300E

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

FrameWorks: FreeRTOS, Petalinux (for Zyng7020)

## REMARKABLE PROJECTS

- Thesis: "Relative comparison between different machine learning algorithms for criminal offense detection and immediate response on the event using intelligent IoT devices "
- 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.(Engg) in ICT

Islamic University, Bangladesh.

**2021 - 2023** 

B.Sc(Hons) in ICT

Islamic University, Bangladesh.

CGPA: 3.31/4.00 **2016 - 2020** 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,C,C++,Embedded C , Bash-Linux Shell Scripting.

Machine Learning: Numpy, Pandas, PyTorch Tensorflow, Scikit-Learn, SciPy, matplotlib OpenCV, Apache Spark, Keras.

Network Programming: TCP/UDP, MQTT, RTP

IEC61850-9-2, IEC61850-8-1

Web FrameWork: Django

Scalability&Deployment: **Docker**, Gunicorn Database: MySQL, PostgreSQL, SQLite3 Al Tools Applied: 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.
- **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

#### Jin Young Lee

- New Technology Team Lead at Sanion
- jlee193@sanion.com
- +82 010 3101 1651

## **Moshtaq Ahmed**

- CEO at NybSys
- mostaq@nybsys.com
- **🄯** +1 064 6416 0210

#### Dr. Bikash Chandra Singh.

- Professor, Dept of ICT, IU
- bikash.singh@ice.iu.ac.bd
- +88 016 4858 3273