KHANDAKAR AMIR HOSSAIN

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UVa Hunting amir_ice_1516_iu ⬡ amir-ice-1516-iu.github.io 📍 Geomdan Knowledge Industry Center, Incheon-22664, Republic of Korea.

WORK EXPERIENCE (5 years)

Chief Researcher:
Sanion Co Ltd. (South Korea)
📅 13th Nov 2023 – Present (~2 year)
- Playing with **IED's** in decision making embedded system applications .
- Working with R&D team in developing clean code for Embedded Linux
- R&D on performance improvement of IEC61850-9-2 on Merging Unit

IoT Intern-->Jr IoT Software Engineer-->IoT Software Engineer:
Nybbles Systems Limited (NybSys Pvt. Ltd. - Bangladesh)
📅 1st March 2020 – 31st 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 security issue and major bug fix
- Developed automation tools for repetitive tasks in mass production

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

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

Software Tools & IDE: **Eagle,** Proteous**, EasyEda**, Circuit Maker, **STM32CubeIDE**, **VS Code**, **Spyder**, **Arduino IDE**,
FrameWorks: **FreeRTOS , Petalinux (Zynq7020)**

REMARKABLE PROJECTS

- SANION INTELLIGENT MERGING UNIT (IM2 Realse_V1.2 & V1.3) View
- 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

QUALIFICATIONS

M.Sc.(Engg) in ICT
Islamic University, Bangladesh.
📅 2021 – 2023   **CGPA: 3.24/4.00**
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,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
AI 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**.
- **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

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