KHANDAKAR AMIR HOSSAIN

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WORK EXPERIENCE (2 years 9 months)

IoT Software Engineer:
Nybbles Systems Limited (NybSys Pvt. Ltd.)
1st 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 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–February 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

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