# Md Fakrul Islam

*(Certified Data Scientist/Analyst, Backend Architect, Cloud/Edge Service Integration-Deployment Specialist, Big Data Professional)*

## Education:
Bachelor of Science in Computer Science and Engineering
(Shahjalal University of Science & Technology-3.55 out of 4, Year of completion-2004)

## Address:
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## Career Objective:
Top Level Engineering Manager or Architect that capitalizes on expertise in designing enterprise applications, solution integration, business development and operational excellence.

## Total Work Experience:  16+ Years

## Key Strength:
- AI solution development for prostate cancer stage detection, plant disease detection, speech transcribing, and audio expression analysis.
- Analytics development for maternal health.
- Analytics developed for i-health devices and medical diagnosis tests.
- Skilled with customized open source AI and analytics projects from GIT and DOCKER.
- Expert in cloud , edge computing and simulation in the edge nodes.
- Enterprise and Multi-Tier Solution Design and Deployment
- In Depth knowledge and Hand on Experience on IP Network, API , Middleware & Transactional Server, Application Server, Telecom Billing(WiMAX and Gateway/Interconnected) and Business Intelligence
- Network Operation, Maintenance and Roll Out
- Process Development, Vendor & Customer Handling, Contract & Sourcing and Operational Excellence

## Hands-on AI Projects:
a. Prostate cancer stage detection from DICOM dataset.
   https://github.com/aifakrul/prostate-cancer-detection
b. plant disease detection(Identify 20 deadly diseases of Apple, Grape, Maize, Potato and Tomato)
   https://github.com/aifakrul/Plant-Disease-Detection
c. Speech transcribing of any language and corpus clustering
   https://github.com/aifakrul/Speech-Transcribing-Corpus-Clustering
d. Audio Expression Analysis (Mood detection of Female/Male for angry, calm, fearful, happy and Sad)
   https://github.com/aifakrul/Audio-Expression-Analysis

## DataCamp, USA Certified :
1. Data Scientist with R Track
2. Data Analyst with R

**Udemy Certified:**
1. Microsoft Power BI Desktop for Business Intelligence
2. Tableau 2020 A-Z: Hands-On Tableau Training for Data Science
3. Python for Time Series Data Analysis
4. Customer Analytics in Python 2021
5. Machine Learning 101 with Scikit-learn and StatsModels
6. Statistics for Data Science and Business Analysis
7. NLP with python(Bootcamp).
8. Deep Learning and NLP A-Z™: How to create a ChatBot

**Linkedin Certified:**
1. Learning Spring With Spring Boot 2 and Spring Boot Microservice
2. Essential Training on Amazon Web Services, Machine Learning,  Neural Networks and Convolutional Neural Networks
3. Accelerating Tensorflow With The Google Machine Learning Engine
4. Applied Machine Learning Foundations and Applied Machine Learning Algorithms
5. Data Science Foundations & Fundamentals, Machine Learning & Ai Foundations, Value Estimations and Recommendations
6. Building Deep Learning Applications With Keras 2 0
7. Building And Deploying Deep Learning Applications With Tensorflow
8. Introduction To Deep Learning With Opencv and Image Recognition
9. Opencv For Python Developers
10. Python Essential Training 2
11. PMI Agile Certified Practitioner PMI ACP
12. Agile Development Practices, Product Owner Role Foundations, Project Management Principles, Project Management With Microsoft Project and Reporting With Agile Charts And Boards
13. Certified Scrum Master, Scrum Advanced and Scrum Basics
14. Finance Foundations
15. Statistics Foundations 1, 2 and 3

**Telecommunication Certifications:**
1. WiMAX ZXUN AAA Level-B, ZTE University(ZTE Corporation, China)
2. WiMAX ZXMBW Level-A, ZTE University(ZTE Corporation, China)
3. Level B Training on ZXMBW WiMAX ZTE University(ZTE Corporation, China)
4. Level B Training on IP/MPLS and ZXR10 8900 Series Router
5. Alepo Certified Engineer, Alepo SE 7.2 (Alepo Technologies, USA)
6. Certification in Alcatel Lucent , ZTE and Alepo AAA Server
7. I-CONX, Ireland based, Gateway Billing Vendor certified Engineer.

A. **Present Status:**

**General Manager, Technology, Grameen Intel Social Business Ltd. (**May 14, 2014- Continuing**)**
Grameen Intel Social Business Limited is the world's first IT social business company formed as a joint collaboration between Intel Corporation, USA and Grameen Trust. I look after technology strategy, directions, technology project management and closely work with CXO level. I am also responsible for leadership to execute project management smoothly and manage the technology team of the company to deliver projects in the different parts of the world as well as being involved in the financial opportunities; presenting assumptions and recommending objectives. Recently I have finished a "plant disease detection" project with the collaboration of Intel, USA. I have prepared an AI MODEL to detect the top 5 diseases of potato, maize, and tomatoes, later optimized  and inferenced by intel OpenVino toolkit to reduce the computation time.  I have extensive work experience to test AI models by simulating in different intel platforms in intel dev cloud edge/edge computing, https://devcloud.intel.com/edge/

Please find my AI work at, https://github.com/tsiAILAB/Plant-Pathology and
https://www.intel.com/content/dam/www/public/us/en/ai/documents/iot-sb-tsi-solution-brief.pdf

Recently I have finished the cloud integration and big data services of IoT devices,

a. Digital Soil Master (https://tsi.com.bd/index.php/soil-master-2/): Soil Master is a portable, affordable and easy to use soil test device integrated with fertilizer recommendation software.

b. Coel(https://tsi.com.bd/index.php/coel-maternity-welllnes-bangle/): Coel is a smart wearable bangle that provides pre-recorded messages for maternal health. The backend of the coel is developed by Spring Boot, Angular(Typescript), Spring JPA and MYSQL, the backend system at,
http://agroportal.grameen-intel.com/coel/#/auth/login

c. Dipto Health: Dipto Health powered by Pulse Health Services Ltd. is a cloud-based smart care solution for regular health monitoring that helps vulnerable individuals to take precautions, especially in the COVID-19 scenario.The backend of the Dipto Health is developed by Spring Boot, Angular(Typescript), Spring JPA and MYSQL, the backend system at,
http://202.164.209.166:8080/pulsehealth/#/

Solid expertise and skilled in managing software projects and products through agile scrum methodology and principles. Managed products and projects developed in Core Java, J2EE, Grails/Groovy, Angular/NodeJS, Android, BI & Data Warehousing, embedded system, and C/C++. In addition, I am experienced in international deployment and piloting of our software systems and solutions in many countries.

**Guest Faculty (**May 1, 2016 - Continuing**)**
**Southeast University**
Company Location: Banani-Dhaka
Department: Computer Science & Engineering
Conducted courses: Algorithm, Java Programming, C Programming, Web and Internet Programming and Data communications, theory and lab.

B. **Previous Employment History**

1. **Company Name: Banglalion Communications Ltd**
   **Job Title: GENERAL MANAGER, OPERATION AND MAINTENANCE** (February 1, 2010 - May 14, 2014)
Key role:
1. Development of Business Cases, Use Cases and Acceptance Test Cases for Prepaid/Postpaid/VAS for Data Services, IP telephony and Video Service for Wimax and LTE Billing System (Real-Time Rating and Charging) with Vendor, Alepo Technologies, USA.
2. Development of Business Cases, Use Cases and Acceptance Test Case for Interconnected Billing System for IGW, ICX and IIG for Trade Management, Local and International Carrier Business Management.
3. Operational Excellence and Maintenance of NOC, IP, Core, Transmission, BSS, Tech Support, IT and Billing Network.
4. Supervise all subsections under Technical Billing such as Activation Team, Product Development Team, Billing Support and Maintenance Team, BI and DB Team and Billing Network Team.
5. Planning excellence of the Software Architecture, Integration and Release Management with QA for all new IT solutions
6. Lead Deployment and Integration of Alepo Billing Server with the Core Network (AAA and ASN-GATEWAY).
7. Implementation and integration between SMS based recharging Gateway and Billing PPS Server

8. Implementation and integration between Payment Gateway and Billing PPS Server
9. Implementation and integration between Bank Payment Gateway and Billing PPS Server
10. Implementation and Solution Design for FUP/Fair Usage Policy Engine
11. Implementation and Solution Design for Trouble Ticket System
12. Implementation and Solution Design for Banglalion CRM Solution
13. Implementation and Solution Design for HotSpot Billing System.
14. Deployment and Implementation for IGW, ICX and IIG Billing System for BIGL, MAXENT, and TPNYL

**2.  Company Name: MEDIACELL.BD**
   **Job Title: Manager-Information Technology** (3rd July, 2009 – January 31, 2010)

MediaCell.Ru(Mother Company) and Mediacell.BD develops and realizes complete solutions in the field of financial organizations and telecommunication integration, advance paid telecommunication service systems, subscribers' servicing and other facilities

Key role:

1. Manage the Software Engineers Team
2. Plan and Design the Integration and Porting For Several Platforms
3. Plan and Design the Integration for Mobile Operators and Financial Organizations.
4. Plan The Customization For Payment Terminal And Servers According To The Business Requirements Of 3Rd Party Business Entity.
5. Integration (Based On RFC, Http/Ftp/Soap and IFX Protocol) Of PAYBOX Solution (PAYBOX Server and Terminals) Between Brac Bank Middleware and Integrator Client
6. Integration (Based On RFC, Http/Ftp/Soap, and IFX Protocol)) Of PAYBOX Solution (PAYBOX Server and Terminals) Between Banglalink Middleware and Integrator Client
7. Integration Based On RFC, Http/Ftp/Soap and IFX Protocol) Of PAYBOX Solution (PAYBOX Server and Terminals) Between National Phone Middleware (Fixed Phone) And Integrator Client
8. Integration Based On RFC, Http/Ftp/Soap and IFX Protocol) Of PAYBOX Solution (PAYBOX Server and Terminals) Between Rankstel Middleware (Fixed Phone) And Integrator Client

**3.  Company Name: Eyebill Interactive Solutions** (Concern of Nexcom Telecommunications   LLC, Slater Road, Eagan, U.S.A
   **Job Title: Senior Software Developer** (10th January, 2008 – 30 June, 2009)

My key role was,
1. Plug-In Architect of Different Carriers and Soft Switches
2. Tariff Plan and Rating Architect for Telecoms System
3. Design Component-Based Architecture from RFC Specification

**4.  Company Name: Relisource Technologies Ltd**, Boston (USA) Based IT solution provider.
   **Job Title: Software Engineer** (July-2005 to 31-December-2007)

Key role:
1. Software Enhancement: I worked with international customers, like Broadband Policy Manager-TAZZNETWORKS(USA), EclipseCovergence(USA), Reflectant/EdgeSight-Citrix Systems(USA),Everest Worldwide, Project Tracking System-Electronic Arts(USA), Incentive Compensation Management- Guaranteed Rate Incorporation(USA), AlliantDnutch Associates Inc(USA), Voyager-Human Asset Technologies(USA), Smart Recovery and Hotbackup CYA Technologies(USA), Remote Management of Wireless and Switched Network- NextHop(USA).

**References:**

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|---|---|
| Dr. Narayan Sundararajan, Senior Principal Engineer & Director, Applied Machine Learning at Intel Corporation | Kazi I. Huque, Finance Director at Intel Corporation |