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## MOSHARRAF HOSSAIN

### AREA OF INTEREST

Machine Learning Engineer with expertise in data preprocessing, analysis, and visualization, as well as practical machine learning and deep learning projects. Proficient in various ML packages and frameworks including Scikit-learn, TensorFlow, Keras, and OpenCV. Skilled in automating ML pipelines using Git, ClearML, DVC, MLEM, and CML. Strong background in computer vision and image processing. Seeking a challenging machine learning engineering role to utilize my skills and experience.

### SKILLS & ABILITIES

- **Data Preprocessing, Analysis & Visualization with Python**
  - **Data Preparation: Missing Data Imputation** (Statistical Imputation, KNN Imputation, MissForest Imputation, Iterative Imputation etc.), **Outlier Identification and Removal**, **Feature Selection** (ANOVA, chi2, RFECV, BorutaShap, etc.), **Data Scaling**, **Encoding Categorical Data**, **Making Distributions More Gaussian**, **Feature Engineering**, **Dimensionality Reduction**; Data Visualization using NumPy, Pandas, DuckDB, Dask, ConnectorX, Scikit-learn, MissingPy, Matplotlib, Seaborn
- **Preparing Data -> Preliminary Data Quality Assurance:**
  - [https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/EVI/1.Clean\\_Joined\\_Data\\_As\\_Parquet.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/EVI/1.Clean_Joined_Data_As_Parquet.ipynb)
  - [https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/EVI/2.Clean\\_Grouped\\_Data.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/EVI/2.Clean_Grouped_Data.ipynb)
- **Exploratory Data Analysis (EDA) with NumPy, Pandas, DuckDB, Dask, dataprep, pandas-profiling, QuickDA**
  - **Univariate Profiling:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/EVI/3.Univariate\\_Profiling.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/EVI/3.Univariate_Profiling.ipynb)
  - **Multivariate Profiling:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/EVI/4.Multivariate\\_Profiling.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/EVI/4.Multivariate_Profiling.ipynb)
  - **EDA:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/Exploratory\\_Data\\_Analysis\\_\(EDA\)\\_Classification.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/Exploratory_Data_Analysis_(EDA)_Classification.ipynb)

- **Applied Machine Learning:**
- **Machine Learning (ML):**
  - Practical Machine Learning (ML) projects with **Regression, Classification, Imbalanced Classification, Clustering** using ML packages such as **Scikit-learn, imbalanced-learn, mlens, XGBoost, CatBoost, LightGBM, ML.Net, ONNX**
  - Automatically Discover Good Machine Learning Model with **Hyperopt-Sklearn, TPOT, PyCaret**
    - [https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/EVI/PyCaret\\_AutoML\\_Experiment.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/EVI/PyCaret_AutoML_Experiment.ipynb)
    - [https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/EVI/TPOT\\_AutoML\\_Experiment.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/EVI/TPOT_AutoML_Experiment.ipynb)
  - **Hyperparameter Optimization** with **scikit-optimize, hyperopt, bayesian-optimization, optuna**
    - [https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/EVI/xgb\\_optuna\\_hyper.py](https://github.com/mail2mhossain/practical_data_science/blob/master/EVI/xgb_optuna_hyper.py)
  - Machine Learning Web App with **Streamlit**
  - Model interpretation with **Shapash, SHAP**
  - **Machine Learning (ML) Projects:**
    - **Heart Disease Prediction:**
      1. **Exploratory Data Analysis (EDA):**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/Exploratory\\_Data\\_Analysis\\_\(EDA\)\\_Classification.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/Exploratory_Data_Analysis_(EDA)_Classification.ipynb)
      2. **Data Preprocessing:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/Data\\_Preprocessing\\_Classification.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/Data_Preprocessing_Classification.ipynb)
      3. **Spot-Check Algorithms:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/Spot\\_Check\\_Classification\\_Algorithms.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/Spot_Check_Classification_Algorithms.ipynb)
      4. **Automatically Discover Good Machine Learning Model with AutoML:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/Spot\\_Check\\_Classification\\_with\\_AutoML.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/Spot_Check_Classification_with_AutoML.ipynb)
      5. **Final Model with Hyperparameter Optimized:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/Final\\_Model\\_with\\_Hyperparameter\\_Optimization\\_Classification.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/Final_Model_with_Hyperparameter_Optimization_Classification.ipynb)
      6. **Voting, Stacking, and Super Learner**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/Voting%2C%20Stacking%2C%20and%20Super%20Learner.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/Voting%2C%20Stacking%2C%20and%20Super%20Learner.ipynb)

- **Machine Learning Algorithms from Scratch**
  - **Linear Regression using Statistics:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/S1.LinearRegressionFromScratchUsingStatistics.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/S1.LinearRegressionFromScratchUsingStatistics.ipynb)
  - **Linear Regression using SGD:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/S2.LinearRegressionFromScratchUsingSGD.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/S2.LinearRegressionFromScratchUsingSGD.ipynb)
  - **Logistic Regression using SGD:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/S3.LogisticRegressionFromScratch.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/S3.LogisticRegressionFromScratch.ipynb)
  - **Perceptron using SGD:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/S4.PerceptronFromScratch.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/S4.PerceptronFromScratch.ipynb)
  - **k-Nearest Neighbors (KNN):**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/S5.KNN\\_from\\_Scratch.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/S5.KNN_from_Scratch.ipynb)
  - **Gaussian Naive Bayes:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/S6.GaussianNaiveBayes\\_from\\_Scratch.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/S6.GaussianNaiveBayes_from_Scratch.ipynb)
- **Deep Learning (DL) with Keras, TensorFlow:**
  - **Better Learning** with Configuring Capacity with Nodes & Layers, Batch Size, Number of Epochs, Loss Function, Learning Rate, Data Scaling, Batch Normalization, Activation Function, etc.
  - **Better Generalization** with Weight Regularization, Activity Regularization, Weight Constraints, Decouple Layer with Dropout, Promote Robustness with Noise Regularization, Early Stopping, etc.
  - **Better Predictions** with Model Average Ensemble, Weighted Average Ensemble, Resampling Ensemble, Snapshot Ensemble, etc.
  - Hyperparameter Optimization with **keras-tuner**, **scikit-optimize**, **hyperopt**, **bayesian-optimization**, **optuna**
  - Automatically Discover Good Model with **AutoKeras**
    - [https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/EVI/AutoKeras\\_AutoML\\_Experiment.py](https://github.com/mail2mhossain/practical_data_science/blob/master/EVI/AutoKeras_AutoML_Experiment.py)
  - **Deep Learning (DL) Projects:**
    - [https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/EVI/MLP\\_Keras\\_Experiment.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/EVI/MLP_Keras_Experiment.ipynb)
- **MLOps: Automating ML Model Life Cycles**
  - Automate ML Pipelines with **ClearML**, **Data Version Control (DVC)**
  - Versioning & Sharing Data and Models to remote storage with **ClearML**, **DVC**
  - Data and model management, metrics tracking, experiment tracking, visualization, and automation with **ClearML**

- [https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/EVI/xgb\\_optuna\\_hyper.py](https://github.com/mail2mhossain/practical_data_science/blob/master/EVI/xgb_optuna_hyper.py)
- Model Deployment with ClearML, MLEM
- CI/CD for Machine Learning using ClearML, DVC, Continuous Machine Learning (CML) & MLEM
- **Computer Vision (CV) with OpenCV and Convolutional Neural Networks (CNN):**
  - **Image Processing** (Translation, Rotation, Resizing, Flipping, Cropping, Bitwise Operations, Masking etc.), **Kernels**, **Morphological Operations** (Erosion, Dilation, Opening, Closing, Black Hat, White Hat etc.), Smoothing, Blurring, Thresholding, Gradients, Edge Detection, Contours, Image Descriptors, Feature Descriptors, Binary Descriptors, etc. with OpenCV
  - **Projects:**
    - **Region of Interest - ROI (Edge Detection + Contours):**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/ComputerVision/ROI/auto\\_canny.py](https://github.com/mail2mhossain/practical_data_science/blob/master/ComputerVision/ROI/auto_canny.py)
    - **Image Descriptors:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/Image\\_Descriptors](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/Image_Descriptors)
    - **Feature & Binary Descriptors:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/Binary\\_Feature\\_Descriptors](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/Binary_Feature_Descriptors)
  - **Object Detection:**
    - **dlib + HOG:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/object\\_detection\\_with\\_dlib\\_HOG](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/object_detection_with_dlib_HOG)
    - Sliding Windows, Image Pyramid & Non-maxima suppression with SVM
    - **Bounding box regression** with Keras, TensorFlow, and Deep Learning:  
[https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/Object\\_detection\\_Bounding\\_box\\_regression](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/Object_detection_Bounding_box_regression)
    - **YOLOv3:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/ComputerVision/object\\_detection\\_with\\_yolo/object\\_detector.py](https://github.com/mail2mhossain/practical_data_science/blob/master/ComputerVision/object_detection_with_yolo/object_detector.py)
    - Single Shot Detector (SSD)
    - Faster R-CNN
    - **RetinaNet:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/object\\_detection\\_with\\_retinanet](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/object_detection_with_retinanet)
  - **Instance Segmentation or Semantic Segmentation**

- U-Net
- Mask R-CNN:
  - [https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/Transfer\\_Learning\\_Mask\\_R-CNN](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/Transfer_Learning_Mask_R-CNN)
- Object Tracking with OpenCV
  - CSRT, KCF, MOSSE, Centroid Tracker
- Face Detection, Face Landmarks, Hand Detection, Hand Landmarks
  - Haar Cascades, face\_recognition (dlib), MTCNN, mediapipe
  - Projects:
    - [https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/FaceParts](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/FaceParts)
- Face Identification and Face Verification
  - VGGFace2:
    - [https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/Face%20Identification%20and%20Face%20Verification](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/Face%20Identification%20and%20Face%20Verification)
- Face Recognition
  - OpenCV CascadeClassifier, dlib & face\_recognition, Support Vector Machine (SVM)
  - Caffe-based SSD face detector, OpenFace deep learning Torch embedding model, Support Vector Machine (SVM)
  - Keras FaceNet + SVM:
    - [https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/FaceNet](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/FaceNet)
- Image classification with CNN
  - AlexNet
  - VGGNet:
    - [https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/VGG16](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/VGG16)
  - ResNet:
    - [https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/ComputerVision/Resnet50](https://github.com/mail2mhossain/practical_data_science/tree/master/ComputerVision/Resnet50)
  - SqueezeNet
  - GoogLeNet
- Data Augmentation with Imgaug, tf.data, and Keras' ImageDataGenerator
- Transfer Learning
- Autoencoders
  - Dimensionality Reductions
  - Denoising
  - Anomaly/Outlier Detection
- Raspberry Pi for Computer Vision

- **OCR with OpenCV, Tesseract, EasyOCR, and Python:**
  - Image/Document Alignment and Registration
  - OCR'ing a Document, form, or invoice
  - Automatically OCR'ing Receipts
  - Multi-Column Table OCR
  - OCR'ing Video Stream
  - OCR'ing Text with Custom Tesseract Model
- **Time Series Data Analysis:**
  - Time Series Analysis with statsmodels, pmdarima, fbprophet, Recurrent Neural Networks (RNN), LSTM
  - **Projects:**  
[https://github.com/mail2mhossain/practical\\_data\\_science/tree/master/Time\\_Series\\_Data\\_Analysis](https://github.com/mail2mhossain/practical_data_science/tree/master/Time_Series_Data_Analysis)
- **Natural Language Processing (NLP):**
  - Text/Document Classification with Embedding + CNN
  - Sentiment Analysis with Embedding + Multi-Channel CNN  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/NLP/Sentiment\\_Analysis\\_with\\_Word\\_Embeddings\\_Multi-channel\\_CNN.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/NLP/Sentiment_Analysis_with_Word_Embeddings_Multi-channel_CNN.ipynb)
  - Text Generation with Neural Language Model (Embedding + LSTM)  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/NLP/Neural\\_Language\\_Model\\_for\\_Text\\_Generation.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/NLP/Neural_Language_Model_for_Text_Generation.ipynb)
  - Neural Caption Generation: CNN (VGG16) + Embedding + LSTM  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/NLP/Neural\\_Image\\_Caption\\_Generation\\_Model.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/NLP/Neural_Image_Caption_Generation_Model.ipynb)
  - Neural Machine Translation Model:  
[https://github.com/mail2mhossain/practical\\_data\\_science/blob/master/NLP/Neural\\_Machine\\_Translation\\_Model.ipynb](https://github.com/mail2mhossain/practical_data_science/blob/master/NLP/Neural_Machine_Translation_Model.ipynb)
- **Web Application Development**
  - C#, ASP.NET Core, Blazor Server App, Blazor WebAssembly App
  - Python, FastAPI, Flask
- **Cross-platform (Desktop, Mobile) Application**
  - .Net MAUI
  - Avalonia
- **WebRTC Desktop Apps (Cross-platform)**
  - UI using Avalonia
  - Cross-platform WebRTC Library: SipSorcery, SIPSorceryMedia.FFmpeg, SIPSorceryMedia.SDL2
  - WebRTC Media Server: Janus

- **Microservice with .Net**
  - ASP.NET Core gRPC Service
  - Distributed Application Runtime (DAPR)
    - Service-to-service invocation
    - State Management
    - Publish and subscribe
    - Actors
    - Secrets
    - Resource bindings and triggers
  - Reliable Microservices Data Exchange with Debezium
  - Skaffold, Tye, Helm, Kubernetes
- **Architecture**
  - Clean Architecture
  - Microservice
  - Layer & Tier
- **Design**
  - Domain-Driven Design (DDD)
  - Command and Query Responsibility Segregation (CQRS)
  - Event Sourcing
  - Actor Model
- **Diagram as Code (DaC)**
  - Architectural Diagram using Python **diagrams** package
  - Unified Modeling Language (UML) using Python **plantuml** package
- **Service scalability, high availability and Service Orchestration**
  - Service Fabric
  - Akka.Net Cluster
  - Docker Container with Kubernetes
- **ServiceBus Messaging**
  - RabbitMQ with MassTransit Service Bus
  - ActiveMQ with Apache.NMS (.NET Messaging API)
  - NATS with NATS .NET Client
- **Machine to Machine OR Machine to Server Communication Protocol**
  - Message Queuing Telemetry Transport (MQTT) with MQTTnet client lib
- **IoT product development using MQTT Protocol and Actor Model**
  - MQTT Broker: Mosquitto, emqttd, VerneMQ
  - Akka.Net

- **Distributed and Concurrent (Multi-threaded) Application**
  - Using Actor Model with Akka.Net
- **Relational Database (RDBMS)**
  - MS SQL Server
  - PostgreSQL
  - MySQL
- **NoSQL (Not only SQL)**
  - **Key-value:** Redis (**Use Cases:** session data, user profile and preferences, shopping cart data), and product recommendations
  - **Document Based:** MangoDB, CouchDB (**Use Cases:** Finance, E-commerce, IoT, Event Logging for apps and process, Online blogs)
  - **Column Based:** Cassandra, HBase (**Use Cases:** Storing Sensor Data, Messaging Systems, Storing Time Series Data, Transaction Logging)
  - **Graph Based:** Neo4J (**Use Cases:** Social Networks, Routing, Map apps, Recommendation engines)
- **NewSQL Database**
  - YogaByteDB
  - CockroachDB
- **Project Management**
  - Agile Methodology (Mixed of XP and Scrum)
  - Tool: Team Foundation Server (TFS)
- **Containerization and Container Orchestration**
  - Docker and Kubernetes
- **Source Control**
  - Git

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## CERTIFICATES

- **Applied Machine Learning in Python:**  
<https://coursera.org/share/eab20424c185bdac323b3818ed3340c6>
  - **Introduction to Machine Learning in Production:**  
[https://www.coursera.org/account/accomplishments/verify/7KG353YWYPHF?utm\\_source=internal\\_email&utm\\_medium=certificate&utm\\_content=cert\\_image&utm\\_campaign=button&utm\\_product=course](https://www.coursera.org/account/accomplishments/verify/7KG353YWYPHF?utm_source=internal_email&utm_medium=certificate&utm_content=cert_image&utm_campaign=button&utm_product=course)
  - **Machine Learning Data Lifecycle in Production**  
[https://www.coursera.org/account/accomplishments/verify/UWLFL42QN33L?utm\\_source=link&utm\\_medium=certificate&utm\\_content=cert\\_image&utm\\_campaign=sharing\\_cta&utm\\_product=course](https://www.coursera.org/account/accomplishments/verify/UWLFL42QN33L?utm_source=link&utm_medium=certificate&utm_content=cert_image&utm_campaign=sharing_cta&utm_product=course)
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- Machine Learning Modeling Pipelines in Production:  
<https://www.coursera.org/account/accomplishments/verify/ACZ23XA2C2ND>
- PylmageSearch Gurus Course on Computer Vision:  
<https://images.credential.net/embed/pm1dub8g.png>
- Python for Data Science and Machine Learning Bootcamp:  
<https://www.udemy.com/certificate/UC-50b107bd-2473-42c9-a717-a9221d5828d0/>
- Complete Tensorflow 2 and Keras Deep Learning Bootcamp:  
<https://www.udemy.com/certificate/UC-4b4e4b13-745c-446e-9d18-0aba9a384ad8/>
- Python for Time Series Data Analysis:  
<https://www.udemy.com/certificate/UC-18caefc1-01a6-4f8a-8812-bc042d4499b0/>

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## PROFESSIONAL EXPERIENCE

### CHIEF, COMMUNITY COMPUTING SCHOOL

Dates From July 2019 to Till Date

### SOLUTION ARCHITECT, TIGERIT BANGLADESH LIMITED

Dates From Jan 2022 to Till Date

#### Roles

1. Cross-platform Desktop WebRTC App with Janus
2. Lead Data Science Team

### HEAD OF SOFTWARE, APLOMBTECH

Dates From October 2015 To July 2019

#### Roles

3. Architect (Platform Independent)
4. Technical Lead (Dot Net)
5. Programmer (Dot Net)
6. Project Manager (Platform Independent)

#### Main Project

1. Automated Metering Infrastructure (AMI)
  - a. Meter Data Management System (MDMS)
    - i. NakedObjects MVC Framework for Front End
    - ii. MassTransit Message Bus
    - iii. Microservices deployed in Service Fabric
    - iv. RabbitMQ for messaging
    - v. MS SQL Server as Relational Database

- vi. Entity Framework as ORM
  - vii. Protocol:
    - 1. IEC 61968 (MDMS TO HES Communication Profile)
  - viii. **Highly Scalable and Highly Available with Service Fabric Cluster**
- b. Head End System (HES)**
- i. .Net Core
  - ii. Akka.Net for concurrent connection of DCU (Data Connector Unit)
  - iii. ActiveMQ for messaging
  - iv. Redis
  - v. PostgreSQL as Relational Database
  - vi. Entity Framework as ORM
  - vii. Protocol
    - 1. IEC 61968 (HES to MDMS Communication Profile)
    - 2. DLSP-COSEM (HES to DCU Communication Profile)
  - viii. **Highly Scalable and Highly Available with Service Fabric Cluster and Akka.Net Cluster**
- c. Mobile Apps with Xamarin**

## OTHER PROJECTS

Project Name	Tools
<b>Education Management System</b> <b>Administrative Module</b> <ul style="list-style-type: none"> <li><i>Institute &amp; Branch Settings</i></li> <li><i>Attendance &amp; SMS Settings</i></li> <li><i>Users with Role Management</i></li> <li><i>Website Contents Management</i></li> <li><i>SMS Settings</i></li> <li><i>Calendar Head (Leave Name)</i></li> </ul> <b>Academic Module</b> <ul style="list-style-type: none"> <li><i>Medium, Session, Shift, Class, Section &amp; Subject Settings</i></li> <li><i>Student Admission, List &amp; Custom Search</i></li> <li><i>Student Auto Migration System</i></li> <li><i>Student Transfer System</i></li> <li><i>Academic Calendar &amp; Routine</i></li> <li><i>Attendance</i></li> </ul> <b>Result Module</b> <ul style="list-style-type: none"> <li><i>Examination Settings</i></li> <li><i>Exam Routine</i></li> <li><i>Exam Eligibilities</i></li> <li><i>Exam Seat Plan</i></li> <li><i>Exam Admit Card</i></li> </ul>	C#, ASP.NET Core MVC, MassTransit Message Bus, Akka.Net, RabbitMQ, MS SQL Server

<ul style="list-style-type: none"> <li>• <i>Exam Attn. (Subject)</i></li> <li>• <i>Exam Attn. (Exam)</i></li> <li>• <i>Marks Entry (Subject)</i></li> <li>• <i>Marks Entry (Exam)</i></li> <li>• <i>Results Report</i></li> <li>• <i>Exam &amp; Subject wise Marks Entry</i></li> <li>• <i>Merit List &amp; Individual Report Card</i></li> <li>• <i>Marksheet &amp; Transcript</i></li> </ul> <p><b>Financial/Accounts Module</b></p> <ul style="list-style-type: none"> <li>• <i>Accounts Head (Head Type, Head Category)</i></li> <li>• <i>Student's Account</i> <ul style="list-style-type: none"> <li>○ <i>Fees Settings (Admission)</i></li> <li>○ <i>Fees Settings (Monthly)</i></li> <li>○ <i>Student Fees Settings</i></li> <li>○ <i>Student wise waiver</i></li> <li>○ <i>Student Fees Collection</i></li> <li>○ <i>Student re-collection</i></li> <li>○</li> </ul> </li> <li>• <i>Income/Expense</i> <ul style="list-style-type: none"> <li>○ <i>Dr. Voucher</i></li> <li>○ <i>Cr. Voucher</i></li> </ul> </li> <li>• <i>Financial Reports</i> <ul style="list-style-type: none"> <li>○ <i>Daily Collection</i></li> <li>○ <i>Fees Collection</i></li> <li>○ <i>Student's Dues</i></li> <li>○ <i>Students Ledger</i></li> <li>○ <i>Students Waiver</i></li> </ul> </li> <li>• <i>Global Fee Settings</i></li> <li>• <i>Student wise Fee &amp; Waiver</i></li> <li>• <i>Student Fee Collection</i></li> <li>• <i>Staff Salary Payment</i></li> <li>• <i>Daily Transaction</i></li> <li>• <i>Cash Book &amp; Bank Book</i></li> </ul> <p><b>HR &amp; Payroll</b></p> <ul style="list-style-type: none"> <li>• <i>Employee Information's</i></li> <li>• <i>Payroll</i></li> <li>• <i>Employee Attendance &amp; Leave</i></li> <li>• <i>Monthly Pay slip &amp; Salary Sheet</i></li> <li>• <i>Overtime, Increment &amp; Bonus</i></li> </ul>	
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**HEAD OF OSS-BSS (OPERATIONS & BUSINESS SUPPORT SYSTEMS), NOVOTEL LIMITED**

Dates From April 2009 To March 2015

<b>Project Name</b>	<b>Tools</b>
<b>NovoAirPSS</b> <b>Sales: Booking, Re-Booking, Cancel Reservation/Ticket, Refund Reservation/Ticket, Void Reservation/Ticket, Search PNR, Sales By Agent (B2B), Online Sales (B2C), Online Sales (B2C), Assign To Agent, Cancel of Offload Passenger, Fare, Taxes Search, Flight search, Reports</b> <b>DCS: Check-in &amp; Boarding Pass Printing, Boarding, Seat re-allocation, Offload Passenger, Re-check-in of Offload Passenger, Flight Delay, Flight Close, Reports</b> <b>Revenue and Finance: Inventory Control &amp; Management, Seat Blocking, Block Seat Booking &amp; Re-booking, Re-booking Charges Waiver, Refund Charges Waiver, Agent Creation &amp; Credit Limit Assign, Agent's Payment Management, Agent's Credit Management, Sales XML for Tally, Reports</b> <b>Admin: Default Class wise Seat Allocation, Booking Class Configuration with Rules, Passenger Type Configuration with Rules, Aircraft Configuration with Infant Seat Limit, Fare Configuration based on Class, Origin &amp; Destination, Taxes &amp; Surcharges Configuration based on Origin &amp; Destination, Flight No Configuration, Flight Schedule Creation</b>	C#, Naked Objects MVC, MS SQL Server
<b>NovoTel LCR 1.0</b> <b>Least Cost Routing</b> <ul style="list-style-type: none"> <li>• <b>Region Code Management</b></li> <li>• <b>Route/End Point Management,</b></li> <li>• <b>Template Management</b></li> <li>• <b>Supplier Rate Sheet Upload based on defined template (with Validation &amp; New Region Code Adding),</b></li> <li>• <b>Best Match</b></li> <li>• <b>Forced Routing</b></li> <li>• <b>One To One Routing</b></li> </ul>	C#, Smart Client Software Factory (SCSF), Entity Framework, LINQ to Entity, NPOI for .Net, DsoFramer, WiX, MS SQL Server 2008

<ul style="list-style-type: none"> <li>• Supplier Rate &amp; Route script</li> <li>• Supplier &amp; Customer LCR Script for Routing Team</li> <li>• Customer Rate Sheet generation with e-mail</li> </ul>	
<b>NovoComCMS</b> <ul style="list-style-type: none"> <li>• Configuration (Pop, Device, Port, Link, Bandwidth, SLA Template, Cloud Service, Escalation Level &amp; Engineer etc.),</li> <li>• Account &amp; Contact Management</li> <li>• Sales Order Management</li> <li>• Case Management</li> <li>• Knowledge Management</li> <li>• Finance Management</li> </ul>	C#, Naked Objects MVC, MS SQL Server
<b>NovoTelCMS</b> <b>Carrier Management Systems</b> <ul style="list-style-type: none"> <li>• Carrier Profile</li> <li>• Prepaid and Postpaid Carrier Monitoring</li> <li>• Payment management</li> <li>• Invoice Life-cycle (Auto Inbound/Outbound Invoice Generation, Invoice Reconciliation, Payment Receipt, Dispute Settlement)</li> <li>• Reporting, Customize Reporting</li> <li>• Carrier Portal etc.</li> <li>• EEDR File processing</li> </ul>	C#, ASP .Net MVC, MS Chart, Entity Framework, LINQ to Entity, NServiceBus, NPOI for .Net, JQuery, MS SQL Server 2008

## PRODUCT MANAGER, EYEBALL NETWORKS

Dates From September 2008 To February 2009

Project Name	Tools
<b>Eyeball Chat v3.0</b> Eyeball chat for Windows is a standards-based VoIP client/Soft phone that is SIP and XMPP-compliant, providing full featured <ul style="list-style-type: none"> <li>• Voice and video chat live with friends and family including multi-party conferencing</li> <li>• Rich presence and instant messaging</li> <li>• Chat with AIM, Google Talk, MSN, and Yahoo! Buddies</li> <li>• One-to-one and multi-party text-chat</li> </ul>	VC++, Platform – Windows

<ul style="list-style-type: none"> <li>• Contact list and phone book</li> <li>• File Sharing</li> <li>• Advanced calling features like call hold/un-hold, call transfer, and call forward</li> <li>• PC-to-Phone calls using PSTN gateways</li> </ul>	
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## ENGINEERING MANAGER, GRAMEEN SOLUTIONS

Dates From July 2007 To September 2008

Project Name	Tools
<p><b>Central Monitoring Terminal (CMT)</b></p> <p>The Central Monitoring Terminal (CMT) provides the operator interface and the data base storage facility for the RMM System. It is commercially procured IBM compatible PC running proprietary software within the Microsoft Windows environment. All operational software and data are stored in its hard disk.</p> <p>By CMT, Operator will be able to handle maximum of 25 Sites at a time. The CMT regularly (for example, once a day) polls the Navaid Sites to collect their stored Navaid performance data and adds this to the history files kept on the CMT hard disk. Notification messages sent from the Navaid are also added to the history files. These history files may be viewed by operators for maintenance purposes. Interfaces are also provided on the CMT to enable operators to turn Navaid OFF and ON.</p> <p>When alarm messages are received by the CMT, the operator is alerted by both audible and visual indicators.</p> <p>The new 32 bit version 3.x (ported from 16 bit CMT) of the software is also capable of displaying equipment parameters and printing their values.</p>	VC++, Visual Studio 2005
<b>Anabase Reporting Tool (ART)</b>	1. J2EE 2. BIRT

<p><b>Anabase Reporting Tool (ART) is a business intelligence tool based on open source BI BIRT from IBM eclipse. The main objective of this web based tool is to help the user to create customized reports as per specific requirements.</b></p> <ul style="list-style-type: none"> <li>• <b>ART is capable of making various kinds of report from online data. It generates data report in both standard and cross-tab layout, graphical report; both including sub reports and group reports. Reports can be exported to html, pdf, excel, xml and rtf format. Dynamic parameterization is one of the many exciting feature of the ART.</b></li> </ul>	3. Spring 4. Struts 5. Eclipse 6. Tomcat 7. Oracle 8. SFEE
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**PROJECT MANAGER, UNIQA SOFTWARE & SYSTEMS LTD.**

Dates From October 2006 To April 2007

<b>Project Name</b>	<b>Tools</b>
<b>Houken Kaigo Software (Elderly Care Software for Japan)</b>	VB .Net, PostgreSQL

**PROJECT MANAGER, EGENERATION LTD.**

Dates From August 2005 To September 2006

<b>Project Name</b>	<b>Tools</b>
<b>Customer Relationship Management (CRM): Integrated with MS Outlook 2003</b>	C#, MS SQL Server 2000
<b>License Management System – A pilot project of Bording Data A/S, Denmark</b>	Java, Apache MyFaces, Tomcat 5.5, MySQL

**SENIOR ANALYST PROGRAMMER, SOUTHTECH LIMITED**

Dates From November 2004 To July 2005

**SOFTWARE ENGINEER TEAM LEAD, UNIQA BANGLADESH DESIGN CENTRE**

Dates From May 2002 To October 2004

**SOFTWARE DEVELOPER, GENESIS SYSTEMS LTD.**

Dates From May 2000 To May 2002

**(MOSHARRAF HOSSAIN)**