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SAIFUL ABU

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EDUCATION

The University of Texas at El Paso (UTEP). M.S. in Computer Science (Expected July 2016). **GPA: 3.85**.
Thesis Title: Electricity Demand Prediction in PowerTAC competition Using Machine Learning.
Bangladesh University of Engineering and Technology. BS in Computer Science (Awarded April 2012).
Graduate Coursework: Artificial Intelligence, Advanced Algorithms, Categorical Data Analysis, Human Computer Interaction, Graduate Research Method, Risk Analysis and Complex Decision Making.
Undergraduate Coursework: Artificial Intelligence, Probability and Statistics, Machine Learning, Pattern Recognition, Data Structures, Algorithms, Database, Object Oriented Programming.
Online Coursework: Descriptive and Inferential Statistics, Machine Learning, Artificial Intelligence, Artificial Intelligence for Robotics, Introduction to Psychology.

EXPERIENCE

Research Assistant — **CS Department, UTEP** — **August 2014 - Present**

Intelligent Agents and Strategic Reasoning Lab: Developed electricity demand prediction module using machine learning for a smart grid simulator called Power TAC. Prepared training and test data set from raw data. Applied clustering and different classifiers to group and to make prediction about the electricity demand. Reduced the prediction error from 31% to 13%. Java, Spring framework, Weka, Matlab.
Interactive System Group: Improved performance of exisiting code. Designed experiment, developed program to collect data and to visualize outcome. Participated in explaining 25 prominent factors found that explains how actions affect prosody. C#, Java, Matlab, Shell Script.

Teaching Assistant — **CS Department, UTEP** — **June 2015 - Present**

Managed an average of 60 students per semester for the lab section of the ”Data Structures and Algorithms” course. Contributed on increasing success rate of students than previous times by providing adequate office hours, writing blog articles, delivering lectures, and creating online discussion groups. Java.

Software Engineer — **Mir Technologies, Bangladesh** — **August 2013 – June 2014**

Designed an VoIP dialer app for iOS by analyzing an existing Android app. Improved voice quality of the app by using proper audio framework. Collaborated with customers, server-side developers, and client-side developers of other platforms. Objective-C, C++.

Software Engineer — **Hi-Tech Bangla, Bangladesh** — **June 2012 – July 2013**

Developed a complex radar simulator for Bangladesh Air Force. Increased team performance by introducing version control, selecting proper software building platform, and initiating regular team meeting. Participated in gathering software requirements by collaborating with the customers. Improved code by introducing object oriented and design pattern principles. Presented updates to the customer at regular intervals. Java.

Intern Software Engineer — **SDSL, Bangladesh** — **December 2011 – June 2012**

Fixed rapid battery consumption problem of an Android device by optimizing an existing app. Java.

PROJECTS

- **Enigma Simulator** (2016). Developed world war 2 cryptographic device simulator. Hobby project. Java.
- **Healthy Work** (2016). Developed a smartwatch app that helps prevent injuries caused by repetitive computer usage. Hobby project. C++, Pomodoro principle.
- **Automated Poker Playing Agent** (2015). A successful poker playing agent (first place) for the tournament of Artificial Intelligence class. Java, Breadth First Search.
- **Phone Based Coffee Ordering System** (2015). An automated system that receives the phone call of a customer, gives them a menu, takes order from them and notifies the vendor. PHP, MySQL, VXML.
- **Tomasulo’s Algorithm Simulator** (2015). System architecture level instruction execution simulator. C.
- **Safe Browser** (2011). Developed a browser that prohibits websites with adult content. Naive Bayes, C#.

SKILLS

- Java(Proficient); C++; C; Objective-C; Python; SQL.
- Eclipse; Xcode; Visual Studio.
- Windows; MacOS; Linux.
- Weka, Matlab.