Yousuf Azad

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Work Experience

Nov 2021 – Sep 2022
Data Science Research Internship, *Miele*, Gütersloh, Germany.
- Successful completion of master thesis as part of the internship. Similar to customer segmentation, the goal of the thesis is to find usage pattern based on different characteristics (e.g. when a device is used, how much it is used etc) from Miele IoT data
- Business understanding of the IoT data and exploratory analysis of it using Python, Pandas, PySpark, SQL, Seaborn etc
- Data preparation and feature engineering on said data to create a suitable dataset using Apache Spark, Databricks in Microsoft Azure Cloud environment
- Development of a method and criterion validate the robustness of the clustering result similar to cross-validation using temporal features of the dataset

Oct 2019 – May 2020
Research Assistant (part-time), *CITEC (Bielefeld University)*, Bielefeld, Germany.
- Understanding the paper 'Modularization of End-to-End Learning: Case Study in Arcade Games'
- Improvement of the adhoc code implementation and integration of the RAINBOW algorithm from OpenAI

Jun 2018 – May 2020
Student Assistant (part-time), *Fraunhofer IEM*, Paderborn, Germany.
- Analysis the business and research aspects of the DigiKAM project requirements and translating them technical tasks/issues
- Use of game networking apporaches to create a collaborations platform that enables video call with with real-life and augmented components (AR) together (mixed reality) into one using Unity, Blender, MRTK, Vuforia in Hololens 2

Oct 2015 – Sep 2017
Software Engineer (full-time), *Vizrt Bangladesh*, Dhaka, Bangladesh.
- Using C++ and Qt with Visual Studio, worked mainly in the product 'Viz Libero' and then in 'Viz Arena'. Responsibilities included implementing new features, and fixing bugs according to agile methodologies
- As part of 'Core Team', improvement of the core dependencies of Viz Libero, Viz Arena, and Viz Eclipse
- Integration of unit testing by adding GoogleTest framework in existing codebase
- Implementation of a web version of 'Viz Libero' using Python as a proof of concept

Jun 2014 – May 2015
Game Developer (part-time), *Pechas Game Studios*, Dhaka, Bangladesh.
- Development of mobile games for Android and iOS using Unity, C# and Git

Education

Oct 2017 |
Nov 2022
Master of Science in Intelligent Systems, *Bielefeld University*, GPA: 1.5, *Bielefeld, Germany.*

Apr 2011 |
Aug 2015
Bachelor of Science in Computer Science and Engineering, *Ahsanullah University of Science and Technology*, GPA: 3.3, *Dhaka, Bangladesh.*

Skills

Programming
C++, Python, Scikit-Learn, PySparks, Pandas, Databricks, OpenAI, PyTorch, Unity, C#, MRTK, Vuforia, Qt, Google Test, Java

Others
Git, Mercury, Machine Learning, Reinforcement Learning, JIRA

Projects

Analysis of acoustic data in AMiRo platform, *Signal analysis, C++, C, ChibiOS.*
Implementing a software interface to retrieve data from a microphone (SPH0645LM4H) via I2S protocol to an embedded device and transforming audio input to light and motion output. This was done as a group project for my masters program.

Anomaly Detection, *Java, Eclipse, CMUSphinx.*
Defining and detection of anomalies in voice to detect emergencies e.g. stroke for a research project called 'Smart Mirror'. This was done as a group project for my masters program.

Nod detection, *C++, SVM.*
To figure out what nods are in terms of features and detect them with SVM as part of "GazeTool" research software. This was done as a group project for my masters program.

Smoking Bad, *Unity, Blender, Kinects.*
This was our Imagine Cup 2015 game project
https://youtu.be/FGSfYkBN_S0

Awards and Certificates

Imagine Cup 2015 : Game Category National Champion, *2015*.
Imagine Cup is a global student technology program and competition from Microsoft
Microsoft

Imagine Cup 2014 : Game Category National Champion, *2014*.
Microsoft

Neural Networks and Deep Learning by deeplearning.ai, *Jul 2019*.
Coursera

A Crash Course in Data Science by Johns Hopkins University, *Aug 2018*.
Coursera

Machine Learning by Stanford University, *Jul 2018*.
Coursera