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Education

2012 - 2016 **Bachelor's of Mechatronics Engineering** NUST, Pakistan
CGPA: 3.25/4.00
Thesis Title: "Design and Control of an Anthropomorphic Prosthetic Hand"
Supervisors: Asst. Prof. Dr. Mohsin Islam Tiwana, Asst. Prof. Nida Aziz
Implemented a fully operational realtime brain-computer-interface (BCI) control for a prosthetic hand. Also designed and fabricated an anthropomorphic prosthetic hand with 6 D.O.F.

Certifications

- **Amazon Web Services Certified Big Data - Specialty**
(expires - 17 October 2022)
- **Amazon Web Services Certified Machine Learning - Specialty**
(expires - 3 December 2022)

Skills

- **Machine Learning** Numpy, Pandas, Scikit-learn, Tensorflow, Keras
- **Distributed Document Store/Search Tool** Elasticsearch
- **Log Ingestion Tools** Kinesis Agent, Fluentd, Logstash, Filebeat
- **Visualization** Matplotlib, Seaborn, Tableau
- **Analytics** Apache Spark (PySpark)
- **Cloud Platforms** Amazon Web Services (AWS), Google Cloud Platform (GCP)

Experience

01/20 - Now **Customer Engineer** ADD O AI, Lahore
Responsibilities:

- Liaising with stakeholders for determining business pain points
- Helping clients reach the best technical solution for their Data and AI needs
- Performing feasibility analyses for Machine Learning and Big Data use-cases
- Architecting cloud based Machine Learning solutions, Data Lakes, Data Warehousing solutions
- Working closely with sales and business units to create proposals for projects



02/19 - Now	Data Scientist - Principal Data Scientist	ADD0 AI, Lahore, Pakistan
	<i>Responsibilities:</i> <ul style="list-style-type: none"> • Tech Lead for numerous projects with various multinational organizations • Lead for partnership initiative with AWS • Responsible for upskilling employees in Machine Learning and Big Data domains within the AWS ecosystem • Developing POCs for various AI & ML use-cases • Conducting hiring interviews on behalf of reputed clients for ML positions • Generating use-cases and Machine Learning applications in diverse business domains <i>Project Themes:</i> <ul style="list-style-type: none"> • Enterprise Data Strategy: Analysis, Solutioning, Roadmapping • Machine Learning assisted CRM • Fraud Detection in banking • Targeted Marketing in retail • Predictive Sales Analytics • Anomaly Detection in retail <i>KPIs:</i> <ul style="list-style-type: none"> • Targeted Marketing Campaigns rollout: 7 successful campaigns for different brands • Daigou (professional shopper) identification using Anomaly Detection: 3000+ confirmed profiles caught • Deployed 10+ PoCs on cloud for various clients 	
06/17 - 02/19	Data Science Lead	Numen Inc., Palo Alto, California
	<i>Responsibilities:</i> <ul style="list-style-type: none"> • Advising with Machine Learning strategy for a security product • Devising real-time anomaly detection with collected logs for catching potentially malicious processes • Creating Data Pipelines for the Machine Learning application <i>Project Theme:</i> <p>Anomaly Detection in cyber-security applications</p> <i>KPIs:</i> <ul style="list-style-type: none"> • Successful detection of numerous Malware, Trojans, and Exploits via anomaly detection module • Declared partners by Xilinx • Favorable reception of concept at Defcon Conference 2019 	
06/17 - 02/19	Data Engineer	Ebryx Pvt. Ltd., Lahore, Pakistan
	<i>Responsibilities:</i> <ul style="list-style-type: none"> • Creating Data Pipelines for Machine Learning applications • Performing ETL tasks in Local and Cloud settings • Creating Machine Learning models and servings • Conducting hiring interviews for Data Science team <i>Project Themes:</i> <ul style="list-style-type: none"> • Centralized log collection and analysis systems • AI based Video Surveillance Systems • Road Safety applications using Computer Vision • Continuous authentication using User Behavior Analysis • Anomaly Detection in cyber-security applications 	
07/14 - 12/14	Intern	Ebryx Pvt. Ltd., Islamabad, Pakistan
	Python scripting for web-scraping and NLP over scraped text.	

Completed Projects

First-touch customer lifetime value prediction

On the first transaction, predict the lifetime value of the customer, so that the business can identify and invest in potentially valuable customers early on

AWS, Sagemaker, Alteryx, EMR, Spark, Hive, Tensorflow, Keras

Anomaly Detection in retail

Identify professional (surrogate) shoppers who take benefit from subsidised prices and shop in bulk to further sell at premium rates, hurting the company's business

AWS, Sagemaker, EMR, Spark, Tensorflow, Keras, Identification of surrogate shoppers

Predictive Sales Analytics

Predict the demand of certain SKUs at regional stores, to aid in logistics decision making as well as in dynamically pricing the SKUs

AWS, Sagemaker, EMR, Spark, Tensorflow, Keras, Sales Predictions at user granularity

Targeted Marketing in Retail

Raised the response for email campaigns by 40% for one of the world's biggest international retail stores

AWS, Sagemaker, EMR, Spark, Tensorflow, Keras, Market Segmentation, Influence Modeling, Propensity Modeling

Fraud Detection in Banking Transactions

POC for one of Singapore's biggest banks

Azure, Tensorflow, Keras, Anomaly Detection in Transactional Data

Churn prediction in retail

Predict likelihood of churn in customers

AWS, Sagemaker, EMR, Spark, Customer Segmentation

AWS based Log-Pipeline and Anomaly Detection

Stream log files in a number of systems to a central data repository, and detect anomalies to highlight potential security risks

AWS, Kinesis, Data Stream, Lambda, Elasticsearch, Spark, Flask, ML assisted Cyber-security

Athlete tracking for application in Sports

Deep learning, Tracking, Python

Order information retrieval from restaurant receipts

OCR, Tesseract, Python

Deduplication of Address Records for hyper-local applications

Python, NLP, Deduplication

Highway Cam visibility Estimation

Computer Vision, Visibility, Machine Learning, OpenCV, Scikit Learn, Python

Object Detection and Tracking software (Vigilyx)

Deep learning, Tracking, Python, Design, Documentation, Biz-dev, ML based Video Surveillance

Centralized Log collection and Anomaly Detection

ELK Stack, Elasticsearch, Logstash, Filebeat, Spark, Anomaly Detection, Unsupervised

BCI controlled Prosthetic Hand

3D Design, Fabrication, Brain-Computer-Interface, Machine Learning, Embedded, Beaglebone, Multiclass Classification

Location-Aware News Tracker

Semi-supervised, NLP, Classification, Web-scraping, Python

Music Sheet Reader

Image processing, MATLAB

Gesture Driven Interactive Puzzle

Image Processing, OpenCV, C++

Courses (MOOCs)

- **Data Engineering, Big Data, and Machine Learning on Google Cloud Platform Specialization** *Google - Coursera*
 - End-to-End Machine Learning with Tensorflow on GCP
 - Production Machine Learning Systems
 - Image Understanding with Tensorflow on GCP
 - Sequence Models for Time Series and Natural Language Processing
 - Recommendation Systems with TensorFlow on GCP
- **Advanced Machine Learning with TensorFlow on Google Cloud Platform Specialization** *Google - Coursera*
 - Google Cloud Platform Big Data and Machine Learning Fundamentals
 - Leveraging Unstructured Data with Cloud Dataproc on Google Cloud Platform
 - Serverless Data Analysis with Google BigQuery and Cloud Dataflow
 - Serverless Machine Learning with Tensorflow on Google Cloud Platform
 - Building Resilient Streaming Systems on Google Cloud Platform
- **Deep Learning Specialization** *deeplearning.ai - Coursera*
 - Neural Networks and Deep Learning
 - Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization
 - Structuring Machine Learning Projects
 - Convolutional Neural Networks
 - Sequence Models
- **Machine Learning Specialization** *University of Washington - Coursera*
 - Machine Learning Foundations: A Case Study Approach
 - Machine Learning: Regression
 - Machine Learning: Classification
 - Machine Learning: Clustering & Retrieval
- **Tensorflow in Practice Specialization** *deeplearning.ai - Coursera*
 - Introduction to TensorFlow for AI, ML, and Deep Learning
 - Convolutional Neural Networks in TensorFlow
 - Natural Language Processing in TensorFlow
 - Sequences, Time Series and Prediction
- **Big Data Essentials: HDFS, MapReduce and Spark RDD** *Yandex - Coursera*
- **Data Science Specialization** *Johns Hopkins University - Coursera*
 - The Data Scientist's Toolbox
 - R Programming
 - Getting and Cleaning Data
- **Machine Learning** *Stanford University - Coursera*
- **Using Databases with Python** *University of Michigan - Coursera*
- **Algorithmic Toolbox** *University of California, San Diego - Coursera*