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## EDUCATION

• Kumoh National Institute of Technology (Kit) Gumi, South Korea Master of Science in IT Convergence Sep. 2018 - Dec. 2020 • National University of Sciences and Technology (NUST) Islamabad, Pakistan Bachelor of Engineering in Electrical (Telecom) Engineering Sep. 2012 - July. 2016

### EXPERIENCE

 ToICoS Daegu, South Korea Data Scientist-Intern Jan. 2021 Mar. 2021

- o In-House Water Leakage Detection: Created models for detecting in-house water leakage using smart water
- Water-Meter Freeze Detection: Created models for calculating the probability if the water meter would freeze
- Kumoh National Institute of Technology

Gumi, South Korea Sep. 2018 - Dec. 2020

Research Assistant

• Research Assistant - Machine Learning: Research on machine learning and deep learning algorithm using TensorFlow and Python. Mainly worked with time-series datasets and predictive modeling problems.

### Projects

- Credit Card Fraud Detection Using Imbalanced Classification: Used a combination of different sampling techniques to reduce and balance the dataset. The main focus was on decreasing the run time of the entire code. Achieved a 50% decrease in run time than the best performing algorithm while keeping the same results.
- Tax Forecasting Using Deep Learning: Comparison of different Machine learning and Deep learning techniques for purpose of forecasting the tax-revenue for future months
- Loan Approval Using Machine Learning: Classification of customers as good or bad to decide if the should be given a loan. Challenge here was to deal with skewed data because the ML algorithms expects a balanced dataset for proper learning.
- Data Exploration in SQL Covid Cases Data: Exploratory Analysis on Covid Dataset Using SQL to see any interesting patterns on country and continent scale.
- Covid Cases Visualization Using Tableau: Visualization of Covid Cases Using Tableau Public.
- Data Cleaning in SQL House Price Data: Nashville House price data was cleaned using SQL by removing hard to interpret columns and by changing and extracting some features from columns like Address etc. Better/Cleaner the Data, easier it is to draw insight from it. Cleaner data also increases the accuracy of Prediction Models as well.
- Data Analysis Using Python IMBD Data: Analysis of IMDB dataset to see correlation between different features of the data. For example the correlation between Movie gross-revenue and budget is highest.

# Research Publications

- A Comparative Study of Machine Learning Algorithms Based on Tensorflow for Data Prediction
- A Survey of Blockchain and Its Applications

#### SKILLS

- Industry Knowledge: Machine Learning, Deep Learning, Classification, Regression, Time-Series, Signal Processing, Predictive Modeling, Anomaly Detection
- Tools: SSMS, Tableau, Excel, Knime, Jupyter Notebook, Anaconda
- Programming Languages: Python, SQL, C++, HTML, CSS
- Python Libraries: TensorFlow, Keras, Scikit-Learn, Numpy, Pandas, Matplotlib, Seaborn, Statsmodels, Prophet
- Language: English, Urdu, Hindi, Punjabi