Saad Siddiqui

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EDUCATION

NEDUET
B.E. Electrical Engineering
Grad. June 2020 | Karachi, Pakistan
CGPA: 3.93 / 4.0 (Rank: 10 / 250)

KARACHI GRAMMAR SCHOOL
CIE A Levels - Natural Sciences
Grad. June 2015 | Karachi, Pakistan
Grades: 4A*s, 2As

COURSEWORK

UNDERGRADUATE
Computing
Digital Signal Processing
Feedback Control Systems
Microprocessor Programming
Data Structures & Algorithms

Power Engineering
Power Generation
Power System Analysis
Power Transmission
Power Distribution & Utilization

INDEPENDENT
Coursera
Deep Learning - deeplearning.ai
Machine Learning - Stanford

Udemy
Machine Learning - SuperDataScience
Python for Data Science - Pierian Data

SKILLS

Programming
Python • MATLAB • Javascript • Shell
• Java • C++ • PHP • MySQL • Swift

Machine Learning
Scikit-Learn • Keras • Tensorflow •
NLTK • matplotlib • pandas • Seaborn

Web
HTML • CSS • Bootstrap • PHP •
jQuery • Node.JS • WordPress

Miscellany
Git • OOP • TDD • Xcode • Eclipse •
Simulink • LaTeX • ETAP • Arduino

WORK EXPERIENCE

K-ELECTRIC | Summer Intern - Distribution
Aug 2019 - Sep 2019 | Karachi, Pakistan
- Conducted fault analysis for coastal substations & aerial bundled cables.
- Learnt K-Electric SOPs & best practices for annual preventive maintenance of DX infrastructure such as PMTs, ABCs, RMUs, PMUs, & pillar boxes.

LUCKY CEMENT LIMITED | Electrical Engineering Intern
May 2019 – June 2019 | Karachi, Pakistan
- Configured & operated ABB VFDs, soft starters, & protection relays.
- Learnt best practices for maintaining and operating instrumentation & power transformers, industrial motors, & relay-based control systems.

RESEARCH

NEDUET ELECTRICAL ENGINEERING DEPT. | Research Assistant
Oct 2019 – Present | Karachi, Pakistan
Leading three undergraduates under the supervision of **Dr. Muhammad Ali Baig** to automate phoneme boundary extraction for speech segmentation using CNNs.

AWARDS

2019	Recipient - IGNITE NGIRI Final Year Project Fund
2018	General Secretary - NED Artificial Intelligence Club
2018	Recipient - Prime Minister's Laptop Scheme Phase V
2018	Vice President - NED Artificial Intelligence Club
2016	Glazebrook Cup for Academic Distinction - Karachi Grammar School
2014	Top in the World - CIE O Level English Language (June '13 Session)

PROJECTS

Machine Learning
FYP: DNN-based Electricity Theft Detection: Using kWh data to train neural networks for identification of electricity thieves in DX grids.
S&P Stock Price Movement: Uses random forest, K-nearest neighbors, and support vector classifiers to predict price movements for S&P 500 stocks.
Cats/Dogs Image Classifier: CNN-base with ANN classifier for Kaggle's Cats vs. Dogs dataset, with augmentation & intermediate activation visualization.
Movie Review Sentiment Analysis with one-hot encoding as well as custom & pretrained embeddings using RNN, LSTM, & DNN.

Electrical Engineering
TX Line Design: Web-based interface for designing 10 power transmission line geometries with RLC & coronal loss calculation functionality.
PMDC Motor Control: MATLAB/Simulink-based modelling, stability assessment, & tuning of a PID controller for a permanent magnet DC motor.
Cabling & Lighting Scheme for a residential load modelled in DIALux Evo. Cable selection & grading done according to IEC standards.
Lighting Load Harmonic Analysis: ADC and FFT analysis of current signal lighting loads using CTs, a sound card, and MATLAB/Simulink.