Sushmita Das

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Education

Carnegie Mellon University (CMU) 3.96/4.0
MS in Electrical and Computer Engineering Jan. 2021 – May 2022

Assam Engineering College 81.7/100
BE in Electrical Engineering Aug. 2016 – Sept. 2020

Publication

Sushmita Das, Ankur Deka, Yuji Iwahori, M. K. Bhuyan, Takashi Iwamoto, Jun Ueda, *Contour-Aware Residual W-Net for Nuclei Segmentation*, KES 2019 special session on Computational Intelligence System and Applications.

Experience

Data Scientist, Meltwater | *Machine Learning, Time Series Analysis* Jan 2022 – Present
- Extracting data from the database, training machine learning models on the data for prediction and analysis (like time series forecasting and anomaly detection) and then creating an API for production.

Research Assistant, Carnegie Mellon University | *Power Grid Reliability Data Analysis* Jan 2022 – May 2022
- Analyzing Electricity Consumption Data of Nigeria to help make power related decisions such as regulating the power-cuts.
- Objectives are to perform data cleaning, analyze available continuous time periods and develop summary statistics.

Research Assistant, Carnegie Mellon University | *Image Segmentation, Deep Learning* Sept 2021 – Dec 2021
- Helped in creating a new dataset to perform Bird Eye View (BEV) Satellite Image Segmentation for navigation.
- Adapted the W-Net model for multiclass road segmentation. The W-Net model outperformed a baseline U-Net model.

Summer Intern, Carnegie Mellon University | *Deep Learning, Computer Vision* June 2021 – Aug 2021
- Developed a driver alert system on Nvidia Jetson Xavier NX with pre-trained object detection models - Mask RCNN, YoloNet, MobileNet.

Research Intern, Chubu University | *Medical Image Segmentation* Sept 2018 – March 2019
- Developed a deep learning based model, Contour-Aware Residual W-Net (WRC-Net), consisting of double U-Net for nuclei segmentation and evaluated it on real Hematoxylin and Eosin stained cell images.
- It showed better overall performance (higher dice coefficient) against previous state-of-the-art nuclei segmentation methods.

Projects

Weather vs. Electricity Consumption Data Analysis | *Pandas, Numpy, Scikit-learn, Excel* Jan. 2022 - Jan. 2022
- Performed data cleaning and analyzed weather and electricity consumption data of one year period from France.
- Used Multiple Linear Regression for forecasting energy consumption.

A/B Testing | *R, SQL, Tableau, Qualtrics* Oct. 2021 - Dec. 2021
- Conducted a survey on 200 people and performed Ordinary Least Squares regression to find the effect of providing the reading time on the willingness to read an article in a domain of interest and analyzed the outcome of interest across various covariates.

Customer Satisfaction Data Analysis | *SAS Enterprise Miner, Tableau* Aug 2021 – Oct 2021
- Performed data analysis on airline customer data to improve customer satisfaction rates by using unsupervised learning (K-means Clustering) and supervised learning (Decision Tree, Neural Network).
- Concluded that business class travellers and customers taking short flights were on average more satisfied.

Animal Classification | *Python, Scikit-learn, Keras, Tableau* Aug 2021 – Dec 2021
- Performed two-class and multi-class animal classification using Support Vector Machine (SVM), Convolutional Neural Network (CNN) and compared their performance.
- Used CNN as feature extractor and SVM as classifier to form an end to end differentiable model which achieved 81% accuracy.

Cyclist Data Analysis | *SQL, Tableau* June 2021 – July 2021
- Analyzed a cycle rental company data from April 2020 to May 2021 to determine how customers with membership and without membership use the rental services differently.
- Suggested ways to encourage cyclists to register for membership.

Technical Skills

Languages: Python, R, SQL, C/C++.
Data Analytics: SAS Enterprise Miner, Excel, Salesforce.
Visualization Tools: Tableau, PowerBI.
Developer Tools: Jupyter Notebook, R Studio, Matlab, Octave.
Libraries: Scikit-learn, Pandas, NumPy, Matplotlib, Keras, PyTorch.
Cloud: AWS, GCP.

Courses

Intro to ML (Python)
A/B Testing (R)
Data Analytics (Py)
Pattern Recognition Theory (Python)
BI and Data Mining (SAS Enterprise Miner)
Big Data Science (Python)
Neural Signal Processing (Matlab)
Google Professional Data Analytics (SQL, Tableau, Excel, R)
Data Science for Technology, Innovation and Policy (R)