NILOY CHAKRABORTY

Master's Student At University of Stuttgart and Student@Bosch

📞 +49-15171684000   ✉ Allmandring-24-c, Zi-20802   📍 70569 Stuttgart
@ chakrabortyniloy2018@gmail.com   🔗 https://github.com/Niloy-Chakraborty

EXPERIENCE

Working Student
Koena-tec GmBH

📅 Oct 2020 –Present   📍 Stuttgart ,Germany

- Data collection from Coffee Machine consumption for a Smart Plug product.
- Implemented Machine Learning and Deep Learning for classifying different order categories from consumption data.
- Clustering analysis for order data analysis.
- Future consumption prediction using Composite LSTM Autoencoder.

Intern in Predictive Analytics
Robert Bosch GmbH

📅 March 2020 –Aug 2020   📍 Stuttgart ,Germany

- Log data parsing and Process Mining of the in-house Software (myMBR) to bring insights from data
- User Journey analysis through Process Analytics and finding the bottlenecks.
- Development of Purchase Order Denial Model using Machine Learning Techniques.
- Writing Test Cases for the development team.

Student Assistant
Fraunhofer IAO

📅 Feb 2019 –Dec,2019   📍 Stuttgart ,Germany

- Time-series data analysis of Smart Meter data for a smart energy system project.
- Time-series stream clustering using different Machine Learning Techniques for Smart Energy Systems.
- Building a Web Application for showing the results.

Scientific HiWi
IAAS-University of Stuttgart

📅 July 2019 –Dec,2019   📍 Stuttgart ,Germany

- Building data flow pipeline for smart data-centers.
- Implemented real-time data monitoring using InfluxDB.

System Engineer
AI For Networks Lab, Tata Consultancy Services Limited

📅 July 2017 –Sept 2018   📍 Hyderabad ,India

- Developed different Business Solutions and Proof of Concepts using Machine Learning and Deep Learning Techniques.
- **PoCs Developed:** IP Network Anomaly Detection, Cognitive KPI Prediction, Network Traffic Classification.

EDUCATION

M.Sc. in INFOTECH
University of Stuttgart

📅 Oct 2018 – Ongoing   📍 Stuttgart , Germany

B.Tech. in Electronics and Communication Engineering
Maulana Abul Kalam Azad University of Tech.

📅 Aug 2012 – May 2016   📍 West Bengal ,India

TECHNICAL SKILLS

Deep Learning   Machine Learning   Software Engineering

Python ●●●●●○
Java ●●●●○○
C ●●●○○○
VBA ●●●○○○

TensorFlow ●●●●●○
Keras ●●●●○○
Scikit-Learn ●●●●○○
Matplotlib ●●●●○○

HTML 5 ●●●●○○
CSS ●●●●○○
JavaScript ●●●○○○
Plotly.js ●●●○○○

Flask ●●●○○○
RabbitMQ & MQTT ●●●●○○
InfluxDB ●●●○○○
MySQL ●●●●○○

OTHER SKILLS

Linux ●●●●●○
CI-CD Pipeline: Jenkins ●●●○○○
MS Excel ●●●●○○
Agile ●●●●○○
Version Control: Git ●●●●○○
Raspberry Pi ●●●○○○
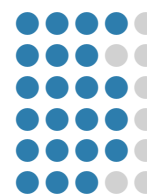
EXPERIENCE

Assistant System Engineer
Tata Consultancy Services Limited

📅 October 2016 –June 2017 📍 Hyderabad ,India

- Web Application development using HTML, CSS, JavaScript
- Java/ Python based back-end development.
- Writing test cases for the softwares

Undergraduate Research Intern
National Institute of Technology, Sikkim

📅 April 2014 – June 2016 📍 Sikkim ,India

- Designed Photonic Crystal Antenna between the range of 200THz and 210THz using CST studio

SELF-PACED PROJECTS

Website Saliency Prediction 🔗
- A study of web-page saliency using FiWi dataset (only 149 images).
- A VGG-16 based Fully Convolutional Neural Network with skip connection was implemented to predict the Human attention map of the Webpages.
- A 2 stage Transfer Learning process was used to compensate the lack of training data and the results were compared with the top saliency models.

My Smart Home Garden 🔗
- A gardening system (Watering, Lighting, and Plant Identification) was automated, which could be operated using Telegram bot.
- Cloud based data storage through Message Queuing for sensor and weather data, which could also be visualized in Telegram bot.
- An AI planning model was developed for automatic watering and lighting.
- CNN based plant name and health identification models were developed.

Real Time Data Monitoring System 🔗
- This project shows an end-to-end data flow pipeline via RabbitMQ and InfluxDB for sensor/ network KPI data.
- The data can be visualized via Chronograf in Real-Time for further analysis

Time Series Stream Clustering for Smart Meter Dataset 🔗
- This project implemented a prototype of the time-series clustering of the London Smart Meter Dataset using various Machine Learning algorithms, like K-means, Hierarchical clustering, and Auto encoder.
- The clustered groups were visualized for better insights of the data.

Model Based Test Driven Development
- An approach for developing faster Regression test suites and also in executing multiple test cases with less manual intervention
- It uses Finite State Machines for visual representation of test cases.
- It also has features like tree visualization of the yang files, python code editor for writing test cases , syntax checker, graph editor etc.

Pima Indian Diabetes Classification 🔗
- In this project, the Pima Indian Diabetes dataset has been classified using the Random Forest classifier.
- Although the initial accuracy was 74%, it has been increased to 79% using Feature Selection technique.

PUBLICATIONS

- **IP Network Anomaly Detection using Machine Learning,***IEEE Conference Paper (I2CT 2019)* 🔗
- **Whale Optimization Algorithm: An Implementation to design low-pass FIR Filter**, *IEEE Conference Paper (iPACT 2018)* 🔗
- **Design of IIR filter Using Gbest Guided Cuckoo Search Algorithm**, *IEEE Conference Paper (ICCECE 2016)* 🔗
- **Design of Higher order FIR Low Pass Filter using Cuckoo Search Algorithm**, *IEEE Conference Paper (ICCSP 2016)* 🔗

CERTIFICATIONS

- "Building Deep Learning Models with TensorFlow" by IBM-Coursera 🔗
- Learning Python for Data Analysis and Visualization" by Udemy. 🔗
- "Hadoop Fundamental (Hadoop 101)", by BigDataUniversity. 🔗
- BSNL EETP course on Telecom Infrastructure by BSNL, India, held from 1/6/2014 to 23/07/2015 inclusing Silver, Gold and Platinum certificate.

HONORS & AWARDS

- Recommended for Student@Bosch program for outstanding performance during Internship
- Won various awards (On the Spot, Special Initiative award, etc.) during my Full time job for my contribution in the R&D
- Honoured with textbhVIDYASHREE titled award for outstanding performance in the 10th Grade, from Amul Group, India
- Awarded for serving as Placement Coordinator during Undergrad.
- Received Scholarship from All India Council for Technical Education for National Level Training Program in Telecom. Infrastructure.

LANGUAGES

English
Hindi
German

INTERESTS

Singing · Watching Movies · Socializing