Utkarsh Shukla

+91 7905057363 E-Mail Github LinkedIn Website

Education

Vellore Institute of Technology, July 2015 - June 2019
Bachelor of Technology, Computer Science. CGPA : 8.43

Research Experience

BRAIN COMPUTER INTERFACE, ALPHA LEARNING

- Data Science (Machine Learning) Research Intern
  - Devised a machine leaning model for prediction and classification of Scalp EEG scans into different cognitive brain states. Classification Metric Accuracy achieved 93.2 %.
  - Mentor: Mr. Arvind Babu

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING, VIT UNIVERSITY

- Data Science (Machine Learning) Research Intern
  - Created a pipeline for quantitive and qualitative analysis of intracranial EEG for prediction of onset of an Epileptic Seizure
  - Mentor: Prof. A Nayeemulla Khan

Work Experience

ATLAN (PREVIOUSLY SOCIALCOPS) — DECEMBER, 2018 - PRESENT

- Data Science - Associate
  - Developing scalable models for prediction of Demographic, Economical and Human Settlement parameters of different geographies and providing business solutions based on the estimated attributes.

MESH EDUCATIONS — JULY, 2018 - DECEMBER, 2018

- Deep Learning Intern
  - Using a Deep Auto-encoders model for analysis of student feedbacks for extracting actionable content related to courses and professors. Developed a statistical named identity parser for determining complaints and suggestions from feedbacks.

EURO EXIM BANK — FEBRUARY, 2018 - JUNE, 2018

- Deep Learning Intern
  - Created a Deep Learning Siamese neural net models which implements one shot learning for automated video and image pair KYC verification feature for the bank app

MENTORED RESEARCH — DECEMBER, 2016 - DECEMBER, 2018

- Full Stack Developer
  - Development of Rest APIs, management of payment gateways and UI/UX for interaction of students with different courses.

Publications

- Epileptic Seizure Prediction Through Machine Learning and Spatio-Temporal Features Based Time Series Analysis of Intracranial Electroencephalogram Data
- An Adroit Approach for Extractive Text Summarization
- Weighted PageRank Algorithm (Accepted)

Projects

- EEG Simulator
  - Developed a simulator for imitating brain waves of different cognitive states using reinforcement learning over standard Neural Mass Excitation Model using feature matching from the energy, frequency and time domains.
- Epilepsy predictor
  - Developed an ensemble machine learning model for increasing sensitivity of individual ML models towards seizure onsets, over scalp EEG.
- pyEEGpipeline (Library)
  - A pipeline which solves the problem of EEG artefact removal and feature extraction. The library can be used to feed in raw data and then simply get feature representation of the data from Time, Frequency and Energy domain.
- Code Rank, VIT University
  - Platform for development, compilation and submission of codes for assessment. Serves as a substitute for a previously used paid service.
- Automated Attendance System
  - Developed a deep learning framework for a completely automated, facial recognition based attendance management system incorporating realtime auto enrolment and liveliness detection.

Entrepreneurship and Talks

Developed an amalgamation of hardware and software for realtime epileptic seizure prediction.

- Fund of 20,000 £
- Proof of concept presented in May, 2019.

Talks

- Getting Brain Waves to Python | Pydata Delhi
- A Dive into Brain Waves | GoogleDeveloperGroup DevFest Delhi

Skills

- **Development:** Flask, AngularJs, OpenCV, Selenium, Machine Learning, Deep Learning
- **DevOps:** Git, Docker (Basic), AWS, GCP, Spark, Kubernetes (basics), Airflow, Presto, Hadoop