Deep Raval

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Proficient in **Python** and **C/C++**

Education

- **Adani Institute of Infrastructure Engineering** — Ahmedabad, India
  B.E. in Information and Communication Technology; CGPA: 9.81/10.0 — *Aug. 2017 - Present*

Experience

- **FutureAPI** — Bengalore, India
  Data Scientist Intern — *Oct 2020 - Nov 2020*
  - Worked with **SV2TTS, Tacotron, WaveNet** etc. technologies for voice cloning and synthesis.
  - Implemented a **CLI** with support for synthesis of large amount of text.
- **IIT-BHU** — Varanasi, India
  Summer Workshop cum Internship — *June 2020 - July 2020*
  - Worked on the project "**Character Recognition on Time Series Sensor Data collected from Smartphone Sensors**".
  - Achieved accuracy of **93.60%** on training data and **89.51%** on testing data after experimenting with **LSTM, GRU, Bidirectional LSTM and Conv-LSTM** based models using **Tensorflow**.

Projects

- **Neural Network Sandbox | Python, Tensorflow, Pandas, Matplotlib, Kivy**
  - This project provides **GUI** for creating and training simple **feed forward neural networks**.
  - Various **hyper-parameters** can be tweaked from the GUI itself. It also supports **visualization** of the **network and training/testing statistics**.
- **Knapsack Container Loading Problem | C++, Python, Matplotlib, tkinter**
  - We gave **heuristic solution** for Knapsack Container Loading Problem which is **NP-Hard**.
  - Our solution has support for both the **GUI** and the **solution visualisation**.
  - It was developed in the **team of 2** as a part of competition held at our college. We **won the competition** by scoring **19/20**.
- **Neural Networks from Scratch | C++**
  - To understand neural networks thoroughly I implemented them **from scratch**.
  - Implemented various features like **Mini-Batch Gradient Descent optimizer**, **MSE loss function**, **csv file support**, **supporting vector operations** and **model saving/loading support**.
  - Contributed my code to **The Algorithms Open Source Organization**.
- **Digit Recognizer | Python, Tensorflow, OpenCV, tkinter**
  - A little project which **implements ML model** (trained on "Hello World of ML" - MNIST Digit Dataset) in **real life**.
  - Have **GUI** which **supports drawing, capturing from camera and selecting existing photo of the digit**.

Skills

- **Proficient:** Python, C/C++, git protocol, Keras API
- **Intermediate:** Tensorflow, HTML5, Flask
- **Beginner:** Java, JavaScript, CSS3, Bootstrap4

Achievements

- **Best academic performer** in 2^{nd}, 5^{th} and 6^{th} semester.
- Got **fees waived off** under TFW scheme.
- As a result of being in top 1% of the School Board at class XII Level I **received scholarship offer from the goverment of India worth Rs. 400,000 under INSPIRE scheme.**