Ashwin U Iyer

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Education

- **Vellore Institute of Technology** — Chennai, India
  Bachelor of Technology - Computer Science; GPA: 8.83 — *June 2019 - June 2023*

Skills

- **Languages** Python 3, SQL
- **Frameworks** Scikit-learn, PyTorch v1.0, SpaCy v3.0, TensorFlow v2.0, Keras, Django v3.0, PySpark v3.3, MLflow v1.30
- **Tools** Jupyter Notebook, VSCode, Git, GitHub

Experience

- **Machine Learning Intern** — Bangalore
  Tata Elxsi — *May 2022 - Present*
  - Achieved 87% accuracy with neural network on predicting user likeability for recommendation at startup.
  - Packaged recommender model using MLflow for experimentation and tracking with 98% coverage
  - Created recommendation pipelines using Databricks that process 1 million data points in under 1 minute.

- **Computer Vision Intern** — Remote
  SHARD Analytics — *February 2022 - April 2022*
  - Conceptualized an OCR system with 83% digitwise accuracy using Python and Tensorflow.
  - Served a neural network model with FastAPI with a response time of 0.087 seconds.
  - Trained a CNN model with 9 degree angle error in image deskewing.

- **Deep Learning Research Intern** — Remote
  A STAR Labs — *May 2021 - April 2022*
  - Built a privacy-preserving Federated environment to classify Alzheimer's using CNNs and Siamese Networks with 46% accuracy.
  - Implemented custom optimization algorithms such as FedProx, FedNova and FedAvg for federated training with an average triplet loss of 1.2 per round.

Projects

- **Deep Learning Recommendation System - (NLP, Python, Tensorflow)**
  - Devised a Neural Network based Recommendation System that uses NLP to predict MovieLens ratings with 60% recall.
  - Used GloVE Word Embeddings as baseline to generate user and movie embeddings with a 4GB GPU.
  - Designed the system that performs at par with industrial standards.
- **Fake News Checker - (NLP, Python, Flask, Tweepy, Tensorflow)**
  - Devised a Neural Network system that predicts authenticity of news with 86% accuracy using Glove Word Embeddings.
  - Executed the designed system using Tweepy via a Flask application to profile authenticity of News Channels based on 200 tweets in 7 seconds.
  - Wrote an API endpoint for the model which evaluates and scores with a response time of 0.12s.
- **Pandatorch (PyTorch, Python, Poetry, Pandas)**
  - Published a lightweight package to integrate Pandas and scikit-learn pipelines with PyTorch at just 34.3 KB.
  - Integrated support of CUDA as well as CPU based training for PyTorch 1.0+.

Achievements

- Presented a paper at Machine Learning Developers Summit, 2023
- Won Best Capstone Project for "Generating Embeddings for Deep Learning based Recommender Systems"
- President of the Data Science Club, VIT Chennai.
- 20th Rank in Amazon ML Challenge.
- 72nd Rank in Segmind AI Challenge.
- 362nd Rank in Wipro's Sustainability Challenge.
- Pandatorch has been downloaded 6,096 times as of 17th October, 2022