ARPITANSHU

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EDUCATION

Institute of Technology, Guru Ghasidas University *2014 - 2018*
Bachelor of Technology - Information Technology
CGPA: 8.14

IIT, Kharagpur *Apr - Oct 2019*
Certification in AI & ML - Continuing Education Programme [certificate]

SKILLS

- Proficiency in innovations in NLP space like LoRA, Adapters, Quantization, Watermarking, Agents.
- Ability to understand, experiment, tweak or implement recent Research Papers.
- Time-Series analytics - Forecasting, Anomaly-Detection, Changepoints - Trend - Seasonality Detection.
- Analytics on Temporal Multi-Dimensional Data Cube, Deep Metric Learning, Pytorch, FastAPI.

EXPERIENCE

Quantive (1 yr) June '22 - May '23
ML - II Engineer

- Led a team of 3 ML Engineers, formulated solutions and designed experiments for team.
- Developed LLM-powered agents to create API endpoints and SQL queries for natural language queries, enabling a centralized q&a dashboard.
- Primary Contributor in building an *automated - online - unsupervised* Anomaly Detection & Forecasting engine for the company's Business Monitoring Platform for real-time streaming time-series data with the following key capabilities:
  - Probabilistic Forecasting based on DeepAR & N-Beats.
  - Handle time-series following multiple distributions s.a. Gaussian, Discrete & Negative Binomial.
  - Developed a novel normalization strategy for online training of non-stationary time-series.
  - Developed a relative anomaly scoring mechanism, to minimize anomaly alert storms.
  - Seasonality, Trend & Changepoint Detection amongst other auxiliary features.

Cliff.ai (acquired by Quantive) (2 yrs) May '20 - May '22
ML - I Engineer

- Developed multi-modal metric learning models for product matching using images, text & breadcrumbs.
- Developed a Knowlegde Graph of business metrics based on associated metadata, synchronicity of anomalies & seasonal patterns for serving multiple downstream tasks.
- Developed multiple solutions for Multi-Dimensional Temporal Data.
  - Automatic EDA engine for surfacing insights from inspired by [Microsoft's MetaInsight]
  - Contributed to RnD of Root Cause Analysis for surfacing explainable dimensions to explain change.
  - Capability to generate explainable targetted forecasts to foresee dimensional distribution of KPIs.

Ribbon Communications (1 yr 5 mo) Aug '18 - Dec '19
QA Engineer

- Contributed to testing focusing around high availability (HA) reliability, certificate management, cloud deployment, and stress testing of Session Border Controllers.
- Developed and implemented automation tools to streamline manual tasks for the QA team.

PROJECTS

- **ts-tok** - A Time Series Tokenizer inspired by *Symbolic Aggregate approXimation (SAX)* for seamlessly training Transformers w/ time-series data.
- **diffusion-typeface** - Minimal implementation of Denoising Diffusion w/ CFG from scratch & trained on English typefaces dataset.
- **ssd-object-detection** - Implementation of SSD: Single Shot MultiBox Detector & trained to detect products from Shelf Images of Grocery Dataset.

CERTIFICATIONS

Introduction To Machine Learning	NPTEL - nptel17cs26S1620004
Neural Networks & Deep Learning	Coursera - jwl3leph3b6y
Improving DNNs	Coursera - s5grt7wffmx
Intro to TensorFlow	Coursera - tkpmkzbxm9s9