Ashish **Kumar**

ML Engineer

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About Me

Machine Learning Engineer and **TensorFlow Specialist** with over **2+** years of experience building intelligent automation for SaaS Management Platforms. Expert in leveraging the **TensorFlow Extended (TFX)** ecosystem to deploy production-grade models that solve complex challenges in **Shadow IT detection, license optimization**, and **spend forecasting**. Proven track record of architecting **Transformer-based NLP models** for automated contract parsing and **Deep Recommender Systems (TFRS)** that align software provisioning with actual user engagement. Highly skilled in transforming fragmented data from SSO, HRIS, and financial feeds into actionable, cost-saving insights through scalable, distributed deep learning architectures.

Work Experience

Zluri, Bangalore

Core Competencies & Accomplishments *Apr. 2022 - Present*

- **Document Intelligence (NLP):** Architected an end-to-end contract extraction pipeline using **TensorFlow Transform** and **Keras** to build a custom Transformer-based NER model. This system automatically identifies renewal dates and fiscal obligations in unstructured PDFs, reducing manual audit time by **70%**.
- **Predictive Spend Analytics:** Developed a multivariate **Long Short-Term Memory (LSTM)** network in TensorFlow to forecast SaaS expenditure. By integrating headcount growth and historical billing cycles, the model achieved a **94% Mean Absolute Percentage Error (MAPE)**, allowing the Finance team to optimize cash flow.
- **Intelligent License Optimization:** Engineered a **Wide & Deep learning model** using the **tf.estimator** API to predict user "churn" from specific SaaS tools. This enabled proactive license reclamation, saving the organization over **$400k in annual recurring costs**.
- **Shadow IT Detection:** Implemented an anomaly detection system using **Autoencoders** in TensorFlow to monitor SSO logs and API traffic. This identifies anomalous app-to-app data transfers, uncovering unauthorized "Shadow IT" with a **45% higher detection rate** than rule-based systems.
- **Recommendation Systems:** Built a **TensorFlow Recommenders (TFRS)** engine to suggest optimal software tiers for departments. By analyzing usage patterns across the organization, the system increased internal software utility scores by **30%**.
- **Scalable MLOps with TFX:** Orchestrated the production ML lifecycle using **TensorFlow Extended (TFX)**.Implemented automated data validation and model analysis, reducing the time-to-production for new feature sets from three weeks to four days.
- **Distributed Training & Performance:** Leveraged **tf.distribute.MirroredStrategy** to train large-scale classification models on multi-GPU clusters, processing over **500M+ data points** from global financial feeds and usage logs.

Skills

Programming Languages	Python 3.10.5+, LaTeX
Web Development	HTML, SCSS, Next.js, Javascript, jQuery
Machine Learning Modeling	TensorFlow 2.x, Keras, TensorFlow Recommenders, TF-Hub.
Production/MLOps	TFX (TensorFlow Extended), TensorFlow Serving, Kubeflow.
Data Science	NumPy, Pandas, Scikit-learn, Matplotlib.
Infrastructure	Docker, Kubernetes, Google Cloud Vertex AI / AWS SageMaker.
Tools	Git, Jira, Agile

Education

A.M.C. Engineering College, Bangalore

Master of Computer Applications *Karnataka, India*

- Class : First Class

Administrative Management College, Bangalore

BACHELOR OF COMPUTER APPLICATIONS *Karnataka, India*