Karthik C Tsaliki
(972)-904-6753| 7karthikchowdary@gmail.com

As a **Software Engineer**, I've been involved in developing large scale **Large Scale Distributed systems**. As a **Machine Learning** Specialist, I've been involved in ideating, building and scaling products that use various **Machine Learning** techniques and evangelized business insights to the customers. Have around **7 years** of experience.

Education:
Bachelors in Computer Science at Jawaharlal Nehru Technological University (Aug-12 - May-16)

Programming Languages: Java, Golang, Python
Frameworks & Libraries: Java Spring Boot, Pytorch, Spark, OCI DRC, Proxies, Abase, Redis, EMR, Elastic Search
Cloud Platforms: GCP, AWS
Big Data: Spark and Hive
Machine Learning:
Large Language Models (LLM): Experience in working with Large Language Models for natural language understanding and generation.
Retrieval-Augmented Generative (RAG) Models: Proficient in implementing and utilizing Retrieval-Augmented Generative models for improved question answering and information retrieval.
Databases: Oracle, DynamoDB

Experience:
Bytedance, San Jose, CA (Feb 2023 - Present) Senior Software Engineer (ML) - Payments & Fraud

1) **Payment Channel Integration:**
- Led the strategic integration of Adyen and Stripe payment gateways with Bytedance's global eCommerce platforms, facilitating merchants to offer localized payment experiences in over 15 currencies.

2) **Merchant Onboarding Enhancement:**
- Headed the in-house Merchant Onboarding initiative, streamlining the integration process for global eCommerce platforms.
- Ensured merchants could offer localized payment experiences, resulting in a significant boost to overall revenue.

3) **User-Centric Refund Enhancement:**
- Led the refund process optimization for the US and international market, resulting in a 13% increase in overall PSR and a 4% GMV boost.
- Data Security Assurance: Ensured compliance with TikTok Data Security Standards during the implementation, guaranteeing a secure refund process for users.

4) **Chargeback and Seller Fraud Identification**:
- Spearheaded the integration of an ML solution for identifying chargebacks and seller fraud in TikTok, handling a scale of 10k QPS.
- Designed and Developed End to End model. Also implemented the infra to scale in production.

5) **Adaptive Fraud Detection:**
- Pioneered the implementation of adaptive fraud detection mechanisms for international transactions, contributing to a 3 PP increase in customer trust for the TikTok Shop.

6) **Tokenization Implementation:**
- Instrumental in enhancing customer experience by enabling tokenization for different payment methods, resulting in a 15% increase in conversion rates for each payment method in the US and SEA markets.

7) **Cross-Border Initiative Leadership:**
- Headed the cross-border initiative within the eCommerce platform's payment division, resulting in a remarkable 50% surge in Gross Merchandise Volume (GMV).

eBay, Austin, TX (Sept 2020 - Jan 2023) **Senior Software Engineer (ML) - Payments & Fraud**

1) **Revenue-Boosting Onboarding:**
- Led the new user registration project for eBay managed payments platform, contributing to a 20% annual revenue increase. Approximately 1 million sellers benefited from custom stores.

2) **Scalable Technology Implementation:**
- Utilized Java Spring Boot, Python Pytorch, and PySpark for the new user registration project, ensuring scalability and efficiency.

3) **Automated GDPR Compliance:**
- Spearheaded the GDPR project for payments system, designing and implementing an automated system for anonymizing user data based on government compliance policies.

4) **Efficient Data Processing:**
- Processed data for over 100 million users across 40 different data tables with less than a 0.01% fallback rate in less than a day.

5) **Verification Percentage Improvement:**
- Led the User Contact Information project, improving user verification percentages by a significant 30% and adding 3 million trusted shoppers to the marketplace.

6) **Effective Data Retrieval:**
- Employed Elastic Search for efficient data retrieval and indexing during the project.

7) **Productionized Risk Model:**
- Productionized a risk model for analyzing ATO and buyer fraudulent chargebacks, averaging 100K TPS with an average latency of ~10 ms.

8) **Identity Behavior Model:**
- Designed and implemented the identity behavior model for increasing the friction for potential fraudulent users, saving an average of $40 during each successful inference.

9) **Graph Neural Networks (GNN) Adoption:**
- Initiated and led the org-wide initiative to utilize Graph Neural Networks (GNN) and cross-functional feature engineering pipeline, reducing TTD and TTR by 40%.

Verizon, Dallas, TX (June 2019 - Sept 2020) **Software Engineer (ML) - Risk**

1) **Threat Extraction and Mitigation:** Led the automated network scans and mitigation project, extracting threats and vulnerabilities, resulting in an overall increase in Lifetime Value (LTV) by 3%.
2) **Effective Threat Evaluation:** Implemented a pipeline for auto-evaluating the effectiveness of threats present in the network scans using Text classification.
3) **Threat Evaluation Automation:** Implemented a pipeline for auto-evaluating the effectiveness of threats present in the network scans using Text classification.
4) **Subsidiary Service Improvement:** Improved the performance of subsidiary service by 85% using orchestration in the code.
5) **SLA Improvement:** Improved the SLA of onboarding new clients into the platform by an impressive 70%, ensuring quick and efficient integration.
6) **Revenue Growth Initiative:** Worked closely with product managers to extend the platform for client subsidiaries, resulting in a remarkable 200% increase in gross revenue per year.

Kantar, Chennai, IN (Mar 2018 - June 2019) **Software Engineer (ML) - Ad Tech**

1) **Efficient Pipeline Automation:** Developed ETL, deep learning pipelines, and a web app for NLP applications, automating 70% of the steps required for text classification.
2) **Azure Logic Flow Implementation:** Employed logic flow app in Azure for the automation of video feature extraction pipelines.
3) **Cost-Effective Time Series Model:** Implemented an efficient time series model using Recurrent Neural Networks (RNN), reducing marketing costs for clients like Coca-Cola Inc.
4) **Sentiment Analysis Enhancement:** Implemented an LSTM model for sentiment classification, achieving a 5% increase in accuracy and providing valuable business insights.

mRoads, Hyderabad, IN (June 2016 - Mar 2018) **Software Engineer (ML) - HR Tech**

1) **Search and Retrieval Enhancement:** Instrumental in integrating Apache SOLR for indexing tools across distributed databases, improving search and retrieval capabilities.
2) **Semantic Text Comparison:** Developed a seamless pipeline using NLP for semantically comparing text between different documents using LSTM.
3) **Personalized Suggestions:** Developed and productionized a ranking recommendation model using Spring Boot, enhancing the platform's capability to provide personalized suggestions.