Tarun Kumar Pothineni

+1 (607) 296-8981 | tarunkumarpothineni@gmail.com | linkedin.com/in/tarun-kumar-pothineni/| https://tarunpothineni.dev/

Professional Summary

Full-stack developer with 2.5 years of experience in microservices architecture, database management, and Agile methodologies. Pursuing an MS in Computer Science at the State University of New York, Binghamton, with a proven ability to optimize system performance, enhance AI models, and drive business impact.

Education

Master of Science in Computer Science **Aug 2023 - Present**
State University of New York, Binghamton GPA: 3.940/4 *Binghamton, NY*

Bachelors of Technology in Electronics and Communication Engineering **Aug 2017 – Jun 2021**
The LNM Institute of Information Technology GPA: 3.24/4 *Jaipur, India*

Technical Skills

Language & Testing:: Java, Python, C, C++, Python, SQL, R, JavaScript, JUnit, Mockito **Python Libraries**: Numpy, Pandas, Matplotlib, scikit-learn, PyTorch, Tensor-Flow, Keras **Frameworks**: Spring Boot, Hibernate, gRPC, Selenium, Lambda, Maven **Cloud**: **AWS** (S3, SQS, Glue, Lambda, Sagemaker, EMR, Kinesis) **Data**: Apache (Spark, Hadoop, Kafka, Airflow) **Database**: SQL Server, MySQL, Postgres, Mongo DB, Volt DB, SingleStore, Oracle DB **Tools and Technologies**: Docker, Kubernetes, Jenkins, Rest APIs, Git, Jira, Agile, SDLC, WaterFall, Jupyter, Eclipse, Visual Studio, Postman, Terraform, Splunk, Linux, Unix, Tomcat, Bitbucket, ElasticSearch, Kibana, Grafana, DBeaver, GitLab, Ansible

Experience

Senior Engineer , **Comviva Technologies Limited**, Bengaluru **Dec 2022 – Jul 2023**

- **Spearheaded** a Proof of Concept to upgrade the database, **slashing** costs by 66% and **boosting** efficiency by 15% compared to VOLTDB, while **migrating** 23 microservices seamlessly to Singlestore.
- **Designed and launched** a **Purchase History-based Offer Holdout feature**, driving a **17% increase in client revenue** by **optimizing** offer distribution to recent customers.
- **Developed** a **Lambda architecture** for real-time offer delivery, **accelerating traffic by 60%** and **amplifying revenue by 40%**, while **creating** a **KTable and KStreams** accumulator to **expedite** transaction processing and offer allocation.

Engineer , **Comviva Technologies Limited**, Bengaluru **Jul 2021 – Nov 2022**

- **Revamped** an existing microservice by **integrating** caching, **streamlining** database queries, and **optimizing** code, **reducing** customer offer delivery time by **71.4%**.
- **Integrated** all microservices with Consul, **removing** reliance on external configuration files and **enhancing** multi-deployment compatibility and seamless inter-service communication.
- **Deployed** the **EFK stack** for centralized logging , **improving** log collection, aggregation, and analysis by **40%**.
- **Configured** and **launched** Grafana for real-time monitoring and visualization,**increasing** system observability by 30%.
- **Optimized** PostgreSQL queries in a microservice, **boosting** efficiency and **reducing** output response time by 600ms.

Engineer Trainee, **Comviva Technologies Limited**, Bengaluru **Jan 2021 – Jul 2021**

- **Refined** code quality and **reduced** production defects by achieving **80%** code coverage through test-driven development.
- **Resolved** over **300+ real-time bugs** during client-server deployment, **enhancing** system stability and performance.

Projects

Enhanced YOLO Framework **Oct 2024 – Dec 2024**

- **Optimized** the YOLOv7 model, **improving mean Average Precision (mAP)** by **3.1%** and **reducing inference time by 5.4%**, enhancing detection speed and accuracy on the Pascal VOC 2012 dataset.
- **Increased** model precision by **2.4%** and recall by **1.8%** through hyperparameter **tuning** and **efficient** data preprocessing.
- **Reduced** GPU memory usage by **4.5%** and **enhanced** overall model efficiency, **accelerating** training cycles on Google Colab with a T4 GPU.

HandWritten Digits Recognition **Feb 2024 – Apr 2024**

- **Developed** an Android app using Java and TensorFlow Lite to **predict** handwritten digits with a custom CNN model, **achieving** 98.97% accuracy and reducing latency to 2ms.
- **Evaluated** inbuilt models such as ResNet50, and MobileNetV3, **achieving** accuracies of 98.55% and 96.64%, respectively.
- **Implemented** a robust machine learning solution with a **4-layer CNN, trained** over 7 epochs using the Adam optimizer and dropout regularization, **outperforming** traditional models.