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 and currently pursuing an MS in Computer Science at SUNY Binghamton. Proficient in Java, Spring Boot, React, and cloud technologies like AWS and Azure. Experienced in building microservices, real-time data pipelines with Kafka and Spark, and ML. Skilled in DevOps, CI/CD, and secure, test-driven development.

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 *Jaipur, India*

Technical Skills

Language & Testing:: Java, Python, C, C++, Python, SQL, R, JavaScript, HTML, CSS, 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 Software Developer , **Comviva Technologies Limited**, Bengaluru **Dec 2022 – Jul 2023**

- Spearheaded the successful **migration of 23 microservices** from VoltDB to a relational database system **(RDBMS)**, resulting in a **66% reduction** in infrastructure costs and a **15% improvement** in overall query performance.
- **Centralized services** via **Consul**, reducing deployment effort by **35%** and improving system reliability across environments.
- Engineered a modular, **fault-tolerant** offer distribution system using **Kafka** for real-time processing with near-zero downtime
- Conducted in-depth performance profiling and **JVM tuning**, **improving system throughput by 38%** under peak loads.

Software Developer , **Comviva Technologies Limited**, Bengaluru **Jul 2021 – Nov 2022**

- Refactored legacy codebase into **modular, cloud-native microservices** using **Spring Boot, Docker and Kubernetes**, resulting in an **18%** increase in deployment frequency and simplified **CI/CD automation** across environments.
- Implemented a **RESTful APIs** to exclude high-propensity users from promotional offers, boosting client revenue by **17%**.
- Developed real-time **Grafana dashboards** for end-to-end system health monitoring and integrated proactive alerting with **Slack and Splunk**, cutting incident resolution time by **45%** and improving operational visibility across teams.
- Deployed the **EFK stack** for log management, improving debugging efficiency and **reducing log analysis time by 40%**.
- Optimized **PostgreSQL queries**, reducing response latency by **600ms** and improving **data fetch times by 20%**.

Software Developer Intern , **Comviva Technologies Limited**, Bengaluru **Jan 2021 – Jul 2021**

- Built a **RESTful microservice** to streamline offer distribution, **reducing** response time by **40%** for over 15,000 daily users.
- Boosted code reliability by achieving **80% unit test coverage** through TDD, reducing production bugs by **25%**.
- Resolved over **300+ real-time bugs** during deployment, significantly enhancing system stability and reducing release issues.

Projects

DriveSync **Mar 2025 – Apr 2025**

- Built a full-stack **Google Drive manager** using **React** and **Spring Boot** with **Google OAuth2** and **JWT** for secure access
- Developed **RESTful APIs** for CRUD operations on files with **sub-300ms** sync, ensuring a smooth user experience.
- Implemented Spring **Security** with **CSRF** and OAuth2, automating auth and securing isolated Google Drive access per user.
- Tested backend endpoints with **JUnit 5, Mockito, and MockMvc**, achieving **95%** coverage.

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**

- Engineered an **Android app** using **Java** and **TensorFlow Lite**, integrating a custom CNN model for real-time handwritten digit recognition, achieving **98.97%** accuracy and **2ms** inference latency, optimized for edge deployment on mobile devices.
- Evaluated **pre-trained** models such as **ResNet50 and MobileNetV3**, achieving accuracies of **98.55%** and **96.64%**.
- Implemented a **4-layer CNN** machine learning solution, trained for **7 epochs** with Adam optimizer and dropout regularization, outperforming traditional models.