Vatsal Agrawal

Email : vatsalagrawal6991@gmail.com

Mobile : +91-7571842299

LinkedIn | GitHub

EDUCATION

Indian Institute of Technology Delhi   New Delhi, India
*Master of Technology in Computer Science and Engineering; **GPA: 9.125***   *July 2021 – July 2023*
GATE CSE AIR: 157

SKILLS

Languages: Python, C, Java, Node.Js, Go, SQL, NoSQL   **Tools**: Docker, TeamCity, Harness, Jenkins
System: AWS, Azure, Redis, Kafka, Kubernetes, VMware   **Others**: Flask, YOLO, JPA, Terraform, React

EXPERIENCE

AppDynamics   Bengaluru, India
Software Engineer - Project Lead   *Jan. 2025 – Present*

- **Renewals Support**: Led a **3**-engineer team across 2 time zones, driving **4 multi-million-dollar** renewals by delivering OpenTelemetry, Authn/Authz, and OpenShift features in the K8 VM Cluster.

- **Lossless Migration**: Designed a **TB**-scale MySQL migration service with **zero**-downtime cutover, retiring the monolith system, and reducing infra spend by **18%**.

- **Reliability**: Reduced VM image size by **36%** and resolved **42%** of customer defects by optimizing OS and infra packaging with monitoring pipelines for a distributed system.

Software Engineer   *July 2023 – Jan. 2025*

- **Snapshot Ingestion**: Scaled distributed tracing throughput **5x (40K → 200K spans/min)** and cut **latency 14%** by migrating to stateless Kafka/Redis architecture with real-time cache invalidation using Spring Batch Poller.

- **Usage-Based Billing**: Drove scalable monetization of observability data by developing Kafka-driven Flask services with **HA** TimeScaleDB.

- **Cloud-Agnostic**: Consolidated serverless and cloud-native deployments into microservices, cutting redundant codebases and infra costs **24%** via unified SDK and self-managed Nginx and MySql.

- **Unified Cloud-SDK**: Developed multi-language SDKs (Python, Node, Java) standardizing APIs across AWS/Azure; unlocking seamless migration with on-prem systems.

- **CI/CD**: Reduced AWS Dev-Cloud costs by **12%** by automating a localstack-based test framework and accelerated build cycles by **70%** through parallelized VM image creation.

ACHIEVEMENTS

- **Recognitions:**
  - Earned multiple internal awards at AppDynamics for critical on-time deliveries and cross-time-zone leadership.
  - Awarded **Outstanding Teaching Assistant** at IIT Delhi.

- **Industry Deployment:** Deployed a production-ready React + Flask system at AIIMS Delhi for diabetic retinopathy trial, streamlining patient data capture, fundus image uploads, and disease progression tracking for hundreds of patients

- **Research Publications:**
  - Published **NetraDeep (ACM'24)**, a hybrid YOLO + image processing model for retinal HE segmentation, achieving **93.3%** accuracy on **limited** labeled/unlabeled datasets.
  - Authored **NetraVeins (Scitepress'23)**, a hierarchical retinal vessel tree classification and ordering algorithm with MATLAB, OpenCV, UNet, and GAN models, achieving **90%+** accuracy.

- **Top Academic Projects**: Haskell lexer/parser (1st of 158), C thread library (4th of 98), NLP-based cipher breaker (9th of 211)