Vatsal Agrawal

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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, Java, C, Node.js, SQL, NoSQL
- **Tools:** Docker, Jenkins, Terraform, VMware
- **Cloud/Infra:** AWS, Azure, Kubernetes, Kafka, Redis
- **Frameworks:** Spring, Flask, React

Experience

AppDynamics (Splunk) — Bengaluru, India
Software Engineer - Distributed Systems — *Feb. 2025 – Present*

- **Critical Renewals**: Led a **3**-engineer team across 2 time zones, securing **4 multi-million-dollar** contract renewals by delivering OpenTelemetry and Authn/Authz features in the K8 VM Cluster.
- **Lossless Migration**: Designed a live, **zero-downtime 20TB+** data migration service, retiring the monolith system and cutting maintenance spend by **18%**.
- **Scalable Tracing**: Increased distributed tracing throughput **5x (40K → 200K spans/min)** and reduced **latency 14%** by migrating to stateless architecture with cache optimization.

Software Engineer — *July 2023 – Feb. 2025*

- **Usage-Based Billing**: Drove **monetization** of TBs of observability data for enterprise customers through event-driven APIs with HA TimeScaleDB.
- **Unified Cloud-SDK**: Developed SDKs in Java, Python, and Node adopted by **5+ engineering teams**, standardizing APIs across AWS/Azure/On-Prem and unlocking seamless migration.
- **Cloud-Agnostic**: Reduced infrastructure **costs 24%** and eliminated **6+** redundant codebases by consolidating cloud-native deployments into microservices with self-managed services.
- **Reliability Enhancement**: Reduced VM image size by **36%** and resolved **42%** of customer-found defects through optimized OS/infra packaging and automated monitoring pipelines.
- **CI/CD**: Accelerated builds by **70%** and cut Dev-Cloud **costs 32%** by automating localstack-based test frameworks and parallelized VM image creation.

Achievements

- **Recognitions:**
  - Earned **9+** 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 deep learning + 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 and GAN segmentation, achieving **90%+** accuracy.
- **High-Ranking Projects**: Haskell lexer/parser (1st of 158), C thread library (4th of 98), NLP-based cipher breaker (9th of 211)