

# Aman Kaushik

Arizona State University M.S - Software Engineering - CGPA : 3.97

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## SKILLSET

Java, Python, C++, Typescript, ReactJS, Lambda, DynamoDB, Api Gateway, AppSync, MySQL, RDS, SQS, SNS EventBridge, CloudWatch, StepFunctions, Kinesis, S3, CloudFront, VPC, KMS, CDK, CI/CD, GraphQL, Jest, Mockito

## SUMMARY

Software Engineer with 8 years of professional experience, in the US and India. Last 5 years at Amazon US, building workforce automation and cost optimization systems; leading, hiring and developing the best engineers.

## EXPERIENCE

**Amazon**, Seattle

Dec 2020 - Present

**SDE-Intern** → **SDE** → **SDE II**

**Software Development Engineer II**

July 2022 - Present

- Worked on various high impact business features leading a team of 2-5 members (or as an IC) owning end-to-end design, development, planning, SIT, UAT, cross-team collaboration and launch. Some of my highest business critical projects were :
  - Conversion** - Led a team of 5 engineers to build a scalable internal transfer system that reduced average associate conversion time from 30 min to 90s. A **95% reduction, saving 2000+ business hours per year**. This was an asynchronous lambda-based solution processing 5K conversions per request **reducing manual ToT (time-on-task) by 78%**.
  - Self Service UI** - Automated the process of expanding the transfer product to a new business and associate population. **Saving** an average of 6 weeks per expansion for an average of **24 weeks per year in development time**.
  - Event Driven Data Vending** - Led a team of 3 engineers to design and build an event driven data vending system allowing downstream systems to **receive real time events**. The system also allowed **new clients to be onboard within a few hours**.
  - Labor Planning Automation** - Integrated with an internal system to create a two way data sharing system consisting of async state machines and synchronous **APIs backed by API gateway scaling to 120+ burst TPS**. The system served both business and associates, **saving 1500+ of business hours per year** by eliminating manual planning work and providing heatmaps to associates resulting in more informed transfer decisions.
- Spearheaded operational and engineering excellence** by improving system performance and **establishing team-wide standards** for code reviews, design processes, and perf testing.

### Performance

- Removed latency bottlenecks in the using AWS CloudWatch metrics (latency, cache hit/miss, total time v/s API time, AppSync compression, DynamoDB Accelerator) and web vital metrics (TTI, TTFB).
- Reduced TTI (time-to-interaction) by 52%** via critical feature decoupling and optimizing AppSync queries.
- Empirically proved that the cost of DAX outweighed the latency gains by building a PoC and benchmarking the system. Later extended this to a **team wide template** for a decision document.

### Operational Excellence

- Built a custom load testing framework with built-in production safety. This **reduced testing time from 16 hrs to 1 hr**
- Authored the production readiness document for detailing the process for devs, pms, tpms & sdms, detailing each development stage to ensure consistency, stable releases, and smooth stakeholder collaboration.

### Developer Productivity

- Implemented tooling for code review size limits, improving review speed and participation.
- Established a design review process optimizing senior engineer bandwidth and increasing organizational visibility.

### Hiring and Mentorship

- Mentored** two L4 SDE interns to successful completion of their internships.
- Mentored** two L4 SDEs **to be promoted to an L5 SDE**.

**Software Development Engineer**

Dec 2020 - July 2022

Designed, built and scaled a critical eligibility service responsible for calculating eligibility for each user. The service **handled 50 TPS and 200K+ daily requests**. It allowed complex rules to be created and existing rules to be updated by business without dev intervention.

**Fractal Analytics**, NCR, India *April 2016 - July 2018* : Worked as a Software Engineer on their flagship product TrialRun. Re-architecturing API level code using Celery, RabbitMQ and Redis caching to handle a 95x increase in size for user request.

**S&P Global**, NCR, India *Jun 2015 - Apr 2016* : Worked as part of XpressFeed and Index Ingestion team, delivering financial and index data feeds to clients.