Mehul Agrawal

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Education

BITS Pilani, Hyderabad Campus *2017 - 2021*
B.E. in Computer Science *8.24/10*

Skills

- **Languages**: Proficient in Node.js, C/C++; familiar with Java, Python, SQL
- **Tools**: Git, Nginx, Cloudflare, Docker, CircleCI, New Relic, Grafana, Postman
- **Cloud**: AWS (EC2, Beanstalk, Elasticache, RDS, Cloudwatch, Lambda, Route53, S3)

Experience

Postman *Jan 2021 - Present*
Software Engineer-II / Software Engineer-I / Intern

- Achieved an average of 40% reduction in p95 latencies and a 50% decrease in average and maximum CPU utilization by writing Postman's in-house backend web framework in TypeScript and using it to replace Sails/Fastify in key microservices.
- Reduced time-to-production for configuration and released product changes from an average of 4 days to 2 minutes by implementing hot-reloading configuration support for Postman's WebSocket Gateway, which holds millions of sockets during peak load.
- Decreased server-side induced client reconnections by 95%, essentially eliminating the root cause. This was achieved through reliability improvements in the WebSocket gateway's implementation: inlining the underlying socket.io module to modify request and response payload parsing logic, and adding dynamic socket payload-size limits.
- Improved backend platform hygiene and reduced production errors by spearheading the organization's migration to TypeScript as part of the Platform team's effort. Developed utilities to automatically add type information to existing JavaScript codebases and to migrate to a new configuration structure for all services.
- Reduced the error rate in Postman's workspace load by 15% and achieved 50-80% performance improvement for an important internal endpoint, unblocking use cases for large enterprise clients. This was accomplished by implementing caching at a critical microservice boundary as part of the microservice availability initiative.

Bank of New York Mellon *Aug 2020 - Dec 2020*
Graduate Summer Associate

- Developed user-facing tools to automate key operational tasks for the Revenue and Billing Services team at BNY Mellon.
- Used Visual Basic for Applications (VBA) and Microsoft SharePoint to streamline and automate tasks like VAT verification for high-volume transactions, and payments reconciliation for Transaction Lifecycle Management.

Edifecs *May 2019 - Jul 2019*
Software Engineer Intern

- Developed a Java package from scratch to extract insurance claim information from Electronic Data Interchange (EDI) files without using any external library dependencies.
- Analysed the performance of the package by generating test data containing millions of unique claims based on user-defined templates. Significant performance improvement was achieved and the existing system was replaced.

Achievements

- Received a spot award at Postman for outstanding performance in 2022.

Key Projects

File Sharing Application using Reliable UDP *Apr 2020 - May 2020*
Computer Networks

- Developed a file sharing application in Python by designing and implementing an application layer protocol for reliable data transfer over UDP based on Go-Back-N principle.
- Analysed network throughput by considering various parameters like network delay, packet loss, packet reordering, and packet corruption.