MANAS AGGRAWAL

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EDUCATION

Northeastern University **Boston, MA**
Masters of Science – Computer Science | GPA: 3.75 *Sep 2024 – Apr 2026*

- Relevant Coursework: Algorithms, Programming Design Paradigms, Principles of Programming Languages
- Graduate Teaching Assistant for Fundamentals of Software Engineering (CS 4530)
- Research Apprentice for "Typed Conversational Interfaces" in Programming Languages under Prof Chris Martens

Guru Gobind Singh Indraprastha University **Delhi, India**
Bachelor of Technology – Computer Science Engineering *Aug 2016 – Sep 2020*

- Relevant Coursework: Data Structure, Networking, Operating Systems, Object-Oriented Design, Machine Learning

WORK EXPERIENCE

Studio Graphene **Gurgaon, India**
Software Engineer *Nov 2020 – Jul 2024*

- Built serverless engineering analytics platform using AWS Lambda to pinpoint bottlenecks like high PR wait times, frequent build failures, and blocked dependencies, reducing cycle time and boosting engineering velocity by 23%
- Built distributed, event-driven microservices using AWS SQS messaging queues for decoupled data ingestion and processing, reducing response latency by ~40%
- Ingested raw data from 10k+ weekly events from third party sources into Elasticsearch and ran aggregation queries to calculate high level metrics
- Built automated retry scripts to fetch failed messages from DynamoDB and reprocess via SQS batch writes, eliminating manual intervention and reducing message failure resolution time from hours to minutes
- Built scalable Node.js/TypeScript REST API backend processing 2M+ API requests daily, designed PostgreSQL schema with partitioning and indexing strategies to handle 500GB+ product catalog data and real-time cross-region inventory sync
- Deployed docker containerized microservices on AWS ECS, built CodePipeline CI/CD workflows, configured CloudWatch alarms, and integrated SES for email notifications on deployment failures and system alerts
- Developed real-time tracking and competitive scoring algorithm using Node.js/PostgreSQL with read replicas and connection pooling to serve 100K+ active users, for oddchecker's betting platform
- Engineered production-ready Python Django backend REST framework which was adopted by 10+ teams
- Implemented Redis caching, cutting repeated Algolia API calls and reducing response latency from ~300ms to ~100ms
- Implemented TDD and Trunk-based development practices using Jest and PyTest, achieving 20% faster release cycles

PROJECTS

Performance Monitoring Tool | *Nodejs, TypeScript, AWS X-Ray, npm, OpenTelemetry, cloudwatch, Jaeger, Prometheus*

- Built and published a package on npm, enabling end-to-end distributed tracing across APIs, DB queries, and async tasks thereby reducing mean debugging time by ~60%
- Adopted by 3+ engineering teams and has over 200+ downloads on npm

Personal finance app | *Android, Java, Kotlin, XML, Firebase, Room, MPAndroidChart, Recycle View*

- Developed student budgeting Android app with category-based expense tracking, real-time budget alerts using Firebase Cloud Messaging and visual spending analytics via MPAndroidChart for pie charts and trend graphs

Advanced Image Processor | *Java, SwingUI, Software Design Patterns*

- Built an extensible image processing application applying SOLID principles and design patterns (MVC, Factory, Strategy) to achieve modular architecture supporting 10+ operations

TECHNICAL SKILLS

Languages:	JavaScript, TypeScript, Java, C++, Python
Frameworks:	Node.js, Express.js, NestJS, Django, Laravel, React
Database:	SQL, Postgres, MySQL, NoSQL, MongoDB, Elasticsearch, Amazon DynamoDB, Firebase
Cloud & DevOps:	Cloud Computing, AWS (Lambda, S3, SQS, DLQ, X-Ray), Docker, CI/CD, cloud infrastructure
Others:	Git, Sentry, OpenTelemetry, Ubuntu, REST APIs, web architecture, frontend, agile, SDLC