Ishan Desai

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Work authorization: Canada · Open to in-office/hybrid

Education

University of Windsor Nov 2024
Bachelor of Science in Computer Science, Minor in Mathematics *GPA: 3.50/4.00*

- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming (Java, C++), Networking, Software Engineering, Database Systems, Cloud Computing

Experience

GTPL Oct 2024 – Dec 2024
Software Engineer

- **Reduced p95 latency by 45%** and achieved **100% uptime across peak-billing windows** for "GTPL Saathi" (5,000+ concurrent users) by tuning Redis/Elasticsearch and enforcing **SLI/SLO error budgets**.
- Built **blue-green ECS** deploys with **Terraform + GitHub Actions**, feature flags, and auto-rollback, enabling **zero-downtime weekly releases (99.9% availability)** and cutting **cross-AZ cost by 8%** via shard rebalancing.
- **Hardened** React/Node services: fixed critical vulns, raised **Jest coverage 65%→85%**, added runbooks/alerts, and used **expand-migrate-contract** DB migrations for safe rollouts.

Amazon Jun 2023 – Sep 2023
Software Development Engineer Intern

- Shipped a **Case-History Dashboard** (Stencil/TypeScript + Spring Boot) with paginated, filterable timelines; **cut p95 page load by 35%** and **improved agent task throughput**.
- Designed a **bulk-update pipeline** (UI → Spring Boot → DynamoDB/Node.js → Kinesis → Kotlin Lambda → GraphQL) sustaining **25k updates/s with exactly-once semantics** via idempotency + sequencing.
- Led a 10-week staged production launch with rollback plans, CI/CD quality gates, and 90% unit/integration coverage after authoring a 12-page design doc reviewed by 8 senior engineers; owned priorities and deadlines end to end.

Projects

DevConnect | *Next.js, Node.js/Express, GraphQL, **Yjs (CRDTs)**, WebSockets, Redis, PostgreSQL, Docker/Kubernetes*

- Built Google-Docs–style collaborative editing with **CRDTs (Yjs)** and presence over WebSockets; sustained ~**300 concurrent users** with low conflict rates using **optimistic concurrency**, server-side awareness, **room-scoped ACLs**, **idempotent** ops ingestion, and **backpressure** for hot rooms.
- Implemented keyboard navigation + **ARIA** roles and fixed contrast to meet **WCAG AA**; instrumented with **OpenTelemetry** → **Prometheus/Grafana**, defined **tail-latency SLOs**, and added playbooked alerts/dashboards.

EventStreamX : Streaming ETL on AWS | *Java, Kafka, AWS **Kinesis**, DynamoDB, Docker, Fargate, Prometheus*

- Ingested **5,000+ events/sec** with $<$ **90 ms** end-to-end latency; moved transforms to **AWS Lambda** to cut infra cost **$\tilde{4}$0%** and autoscaled on Fargate with **3×** headroom.
- Upgraded reliability from **at-least-once** → **exactly-once** via **idempotency/sequence checks**; achieved **99.95%** 30-day soak, added **DLQ replay** tooling, alerts/dashboards, and **95%** unit/integration coverage in CI.

Technical Skills

Languages: Java, **C++**, Python, Go, TypeScript/JavaScript, Kotlin
Systems & Backend: Unix/Linux; distributed & parallel systems; networking; microservices; REST, GraphQL, gRPC, WebSockets; large-scale design; consistency; **exactly-once/idempotency**; **Accessibility:** ARIA, keyboard nav, WCAG 2.1 AA
Cloud, Data & Reliability: AWS (Lambda, Kinesis, DynamoDB, EC2, S3); Kubernetes; Docker; Terraform; GitHub Actions; PostgreSQL, MySQL, Redis, DynamoDB; JUnit, Jest, k6; OpenTelemetry, Prometheus, Grafana; SLIs/SLOs, error budgets, DLQ replay, runbooks

Leadership & Certifications

Undergraduate Teaching Assistant (Data Structures & Algorithms): mentored 30+ students; average grades +15%.
AWS Solutions Architect – Associate; Certified Kubernetes Administrator (2024).
Student Representative, Computer Science Department (2021): elected CS rep for 300+ students; drove curriculum updates and improved student-faculty communication.