Shutonu Mitra

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Education

Virginia Polytechnic Institute & State University	*(Aug 2023 – May 2025)*
Master of Science in Computer Science	GPA: 3.87
Military Institute of Science & Technology (MIST)	*(Feb 2018 – May 2022)*
Bachelor of Science in Computer Science	CGPA: 3.65

Work Experience

Full Stack Software Engineer, Mitra US Computer Solutions (June 2025–Present | Remote,USA)

- Owned an **Azure**-deployed **C#/.NET** backend and **Angular (TypeScript)** to track hiring-to-onboarding status, delivering **8+** workflows and **15+** SQL Server Express reporting views, eliminating routine cross-system status coordination across HR and operations.
- Implemented cross-system integrations from **Greenhouse (GHO)** into **WinTeam**, mapping recruiting/onboarding entities into ERP schemas using **.NET + T-SQL**; integrated **Checkr** background-check and SSN verification statuses with validation and state propagation to reduce data-entry duplication and rework by **20%** and cut onboarding **blocked/unknown** cases by **25%**.
- Debugged **cross-system integration failures** by tracing requests and workflow state transitions and validating **SQL Server** data to identify schema and mapping mismatches, restoring reliable onboarding processing.

Back End Engineer, Curanostics Inc. (May 2024–May 2025 | Atlanta, Georgia, USA)

- Led backend development for patient-facing REST APIs as containerized microservices on **Google Cloud** (**Node.js**, **TypeScript**, **Docker**, **GKE**) behind an **API Gateway** and **load balancer**, focusing on p95 latency, reliability, and safe rollout practices for a clinician workflow platform built outside Cerner/Epic.
- Built clinician dashboards in **React** with **React Query** and **Recharts**; added optimistic updates, skeleton states, and error boundaries, driving **20%** engagement growth and **35%** faster time-to-insight.
- Established **GitLab CI/CD** and **Cloud Monitoring** dashboards/alerting to support frequent releases.
- Productionized medical report summarization and Q&A using **RAG** with **LangChain**, adding prompt versioning, latency monitoring, and failure handling; improved QA quality by **35%** on internal evaluation.

Software Engineer Intern, Teletalk Bangladesh LTD. (February 2021–April 2021 | Dhaka, Bangladesh)

- Engineered backend services for a nationwide exam-results platform serving **2**M+ students on results day, running on **on-prem Linux VMs** behind **Nginx/HAProxy** with **MySQL**, ensuring reliable, low-latency access during peak traffic.
- Built search in **Java (Spring Boot)** with composite indexing, pagination, and **Redis** caching; improved retrieval speed by **20%** , enabling faster lookups under peak load.
- Implemented ingestion and validation services; reduced data mismatches by **25%** and duplicate inserts by **70%**.
- Diagnosed and resolved **15+** critical defects across **Java** components (race conditions, cache invalidation, null-safety, edge cases); helped maintain **99%+** availability during release windows.

Data Engineer, Selise Digital Platform (December 2021–March 2023 | Dhaka, Bangladesh)

- Designed and tuned **SQL** (**MySQL**, **Postgres**) and **NoSQL** (**DynamoDB**) schemas with composite indexing and connection pooling; improved p95 read latency by **15%** and reduced DB CPU by **15 − 20%**
- Automated **Spark** and **Airflow** pipelines on **AWS** (**S**3, **Athena**, **EMR**) processing **1 TB/day** improving end-to-end runtimes and reducing pipeline failures through retries, alerting, and backfills.
- Containerized ETL components with **Docker** and deployed **Airflow** on **Kubernetes** with health checks, autoscaling, and rollbacks; reduced deployment time by **12%**.
- Co-owned production model delivery with **Docker** and **Kubernetes**, maintaining **220ms** p95 inference latency; shipped BI assets used by **5** teams, reducing time-to-insight by **30%**

Projects

Cloud-native E-commerce App | React, Restful APIs, MySQL, JDBC, Tomcat, AWS *Github*

- Owned a multi-tier e-commerce service with React SPA, Java/Tomcat backend with MySQL, deployed on AWS with VPC isolation and secure public/private subnet architecture.

Sportsbook Odds Scraper & Ingestion System | Python, FastAPI, HTTPX, Docker *Github*

- Built a resilient ingestion service to fetch real-time lines and props from FanDuel, DraftKings, and PrizePicks; designed a normalized odds schema to unify heterogeneous provider payloads into a consistent event-market model, with rate-limiting, retries, freshness checks, and provider health tracking.

Technical Skills

Coursework:	Data Structures and Algorithms, Operating Systems, Computer Networks, Distributed Systems
Languages:	Java, Python, Go, TypeScript, JavaScript, SQL, Bash, C, C++, C#
Backend & APIs:	RESTful APIs, Microservices, Spring Boot, Node.js, Express, Django, FastAPI
Cloud & Infra:	AWS (EC2, S3, EMR, Lambda, RDS, CloudWatch, SNS, SQS), Google Cloud (GKE), Docker, Kubernetes, Terraform, GitHub Actions, Linux
Data & Messaging:	MySQL, PostgreSQL, DynamoDB, Redis, Spark, Airflow, Kafka