

# Dhruv Mishra

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## PROFESSIONAL SUMMARY

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Senior Software Engineer with **9+ years of experience** designing and owning large-scale, distributed advertising and reporting platforms. Currently building Samsung Ads' Demand-Side Platform (DSP), delivering mission-critical systems for high-volume reporting, analytics, and campaign workflows. Specialized in **React and TypeScript micro-frontend architectures, GraphQL and RESTful backend services, and high-performance PostgreSQL data models.**

Drives **AI tooling and agentic development** as a member of Samsung Ads' internal **AI Committee**, integrating LLMs and agent frameworks into engineering and analytics workflows. Experienced in observability-first systems using Prometheus and Grafana to monitor SLAs, latency, and complex state transitions across distributed services. Strong background in system design, performance optimization, and cross-functional collaboration, with a proven track record of delivering software that drives significant revenue impact and operational efficiency.

## TECHNICAL SKILLS

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**Languages:** JavaScript (ES6+), TypeScript, Golang, Python, Ruby, Java, SQL, HTML5, CSS3, SASS, JSON, WCAG

**Frontend:** ReactJS, TypeScript, Micro-Frontend Architecture (Module Federation), Redux, React Router, D3.js, Tailwind CSS, Web Accessibility (WCAG)

**Backend:** GraphQL (Ruby on Rails), RESTful Services (Golang, Node.js), Express.js, Java (Spring Boot), OAuth

**AI / ML Tooling:** LLM Integration (OpenAI, Anthropic, Watson), Agentic Workflows, Retrieval-Augmented Generation (RAG), Prompt Engineering, AI Developer Tooling, MCP

**Databases:** PostgreSQL (Schema Design, Query Optimization, Materialized Views / Scenic), MySQL, MongoDB, NoSQL

**Web Services:** RESTful APIs, GraphQL APIs

**Testing & Tools:** Jest, End-to-End Testing (Cypress / Playwright), Webpack, Vite, Git, Jenkins, JIRA, Figma

**DevOps:** CI/CD Pipelines, AWS (EC2, S3, IAM), Docker, Netlify, Vercel, GCP

**Others:** Distributed System Design, Observability & Monitoring (Prometheus, Grafana), Performance Optimization, Agile / Scrum, Clean Architecture

## WORK EXPERIENCE

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**Senior Full Stack Engineer** | Samsung Electronics America | Mountain View, CA | Feb 2025 – Current

- **Member of Samsung Ads' internal AI Committee**, driving org-wide strategy for LLM-powered tooling, agentic workflows, and developer productivity across engineering teams.
- **Built AI tooling and agentic systems** on the Samsung Ads platform — integrated LLMs into internal workflows for code review, data exploration, and report generation, reducing manual engineering toil for analytics and ops teams.
- Designed and shipped **agentic developer-productivity tools** that automate repetitive engineering tasks (test scaffolding, schema migrations, doc generation), measurably accelerating feature delivery.
- Designed and owned **mission-critical reporting and insights systems** for Samsung Ads' Demand-Side Platform (DSP), supporting large-scale advertising workflows across multiple regions and clients.
- Led development of **complex, production-grade micro-frontend architectures** using React, TypeScript, and Module Federation, enabling independent deployments while maintaining platform consistency.
- Architected and implemented **GraphQL APIs** in Ruby on Rails to support high-volume analytical queries and reporting use cases with strict performance and reliability requirements.
- Designed and optimized **PostgreSQL schemas and Scenic materialized views**, significantly improving query latency and report generation times for large datasets.

- Built and maintained **RESTful microservices in Go**, following clean architecture and observability-first design principles.
- Designed an end-to-end **observability and monitoring framework** using Prometheus and Grafana to track report lifecycle state transitions, SLAs, latency, and failure modes; implemented custom metrics instrumentation (counters, gauges, labeled state transitions) for per-report visibility across distributed services.
- Delivered systems and optimizations contributing to **tens of millions of dollars in revenue protection and operational savings** for Samsung Ads.
- **Winner / key contributor in Samsung Ads internal hackathons** with AI-forward prototypes (LLM agents, automated insight generation), with projected multi-million-dollar revenue impact and planned integration into core platform workflows.
- Mentored engineers and reviewed architecture proposals, raising engineering standards through clean architecture and scalable design.

#### **Full Stack Engineer | IBM | San Jose, CA | May 2023 – Feb 2025**

- **Integrated AI capabilities** into DataStage Assistant, leveraging **LLMs and Watson Assistant** to improve system reliability and user experience — early agentic tooling for enterprise data integration before the LLM-agent wave hit.
- Developed **automation tests** for the Transformer expression builder, incorporating Antlr4, ACE Editor, and cpdctl to enhance validation and UI workflows.
- Collaborated with **Bank of America and Ally Financial** to resolve sequential file formatting issues, streamlining migration from legacy systems.
- Upgraded Canvas to **React 18**, with top-level modifications that boosted application performance by 30% and improved user experience.
- Led TVT for version 5.0.0, contributing to internationalization and optimizing the transformer output table's performance, reducing UI latency by 25%.
- Resolved ACP issues and developed automation for **Change Apply / Change Capture**, enhancing reliability and simplifying workflows.
- Expanded system capabilities by adding **ODBC (Snowflake)** support and architecting the **Sydney deployment**, meeting high-priority deadlines.

#### **Full Stack Engineer Intern | Samsung Electronics America | Mountain View, CA | June 2022 – January 2023**

- Designed a new interface for **Linear TV**, improving user engagement by 50% through improved access and audience refinement.
- Streamlined codebase by creating React Hooks and optimizing builds, reducing CI/CD pipeline time by 20%.
- Developed a front-end tool using ReactJS and GraphQL for assessing audience size, improving ad targeting efficiency.
- Enhanced **GraphQL query performance**, reducing query execution time from 2 minutes to under 5 seconds.
- Gained hands-on experience with AWS, Python, and GCP, contributing to scalable cloud solutions and backend integrations.

#### **Senior Full Stack Engineer | Sezzle | Remote | April 2018 – August 2021**

- **Reduced server load by 87%** (from 160 req/sec to 20 req/sec) by implementing effective caching strategies and optimizing database queries.
- Developed and optimized **ReactJS components** for dynamic forms, events, and data flow, leveraging Redux for state management.
- Created **automated widgets and SDKs** used by 20K+ websites, increasing widget integration speed by 95% (from 45 minutes to under 1 minute).
- Built and maintained **Chrome extensions** using JavaScript, OAuth, and REST APIs, enhancing the developer experience for 50+ clients.

- Developed **Golang-based scrapers** for monitoring and maintaining e-commerce platform performance, improving data collection speed by 30%.

### **Full Stack Engineer | Doodleblue | Remote | March 2017 – April 2018**

- Translated UI/UX designs into functional **ReactJS** prototypes, improving user interaction quality.
- Developed **REST APIs** for e-commerce sites using Node.js, Express, and MongoDB, facilitating seamless client-side data access.
- Implemented **chat functionality** and real-time updates using WebSocket and Redux in a job portal platform.
- Launched **15+ public developer APIs** handling over 50,000 daily calls, increasing customer satisfaction and platform scalability.

### **EDUCATION**

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- **Master of Science, Information Systems** — Northeastern University, San Jose, California — 2021–2023
- **Bachelor of Technology, Computer Science** — Vellore Institute of Technology, Vellore, India — 2012–2016