

# SARTHAK GAUR

San Diego, CA · +1 (858) 414-2310 · sarthak22gaur@gmail.com · linkedin.com/in/sarthak-gaur-22041998 · github.com/sarthak22gaur

## EXPERIENCE

---

### Tag-N-Trac Inc. — Senior Software Engineer

San Diego, CA  
October 2023 – Present

- Designed a **Kafka-based distributed ingestion pipeline** processing high-volume IoT sensor and location telemetry, improving data reliability and enabling scalable downstream analytics.
- Reduced device processing time from **21.3** → **6.8 seconds** by engineering a multi-threaded BLE pipeline leveraging multiple radios, increasing throughput for large warehouse deployments.
- Improved operational observability across **10K+ IoT gateways** by delivering secure certificate-validation services with multi-environment trust management.
- Built an image-processing pipeline decoding **thousands of QR, SSCC and HAWB codes per day**, improving device-provisioning accuracy for logistics partners.
- Developed an **AWS IoT-backed** remote camera-configuration and fleet-diagnostics subsystem spanning embedded firmware and cloud services.

### Minfy Technologies — Software Engineer

Wilmington, DE  
April 2023 – August 2023

- Reduced backend compute costs by **20%** via caching, request coalescing, and payload optimization for high-traffic mobile APIs.
- Migrated a legacy enterprise system to **Next.js 13**, improving TTFB and overall load performance by **35%** with SSR and edge routing.
- Built scalable APIs and backend logic powering a React Native medical-testing platform adopted by **10K+ users**.

### Tollring — Software Developer

Noida, India  
July 2020 – July 2021

- Engineered a multi-threaded ingestion system scaling to **hundreds of thousands of Microsoft Teams calls and meetings per day** for enterprise analytics workloads.
- Built a secure, standards-compliant **OAuth 2.0 + OpenID Connect** authentication service for Teams integrations.
- Developed high-performance REST APIs supporting real-time communication insights used by enterprise clients.

### PureSoftware — Embedded Developer

Noida, India  
April 2019 – August 2019

- Ported **Delve (Go debugger)** from x86-64 to AArch64, enabling Go debugging capabilities on Windows-on-ARM devices.
- Cross-compiled **JDK 11** for Windows on ARM, improving Java compatibility on constrained hardware.
- Optimized memory usage and debugging interfaces based on low-level hardware characteristics.

## PROJECTS

---

### Nebula Planner — Open-Source Academic Planning Platform

<https://github.com/UTDNebula/planner>  
August 2022 – August 2024

- Migrated the platform from Firebase to server-rendered **Next.js 13 + MongoDB**, improving performance by **3x**.
- Increased student adoption by **75%** by building a domain-rule validation engine for automated degree-plan verification.
- Led and mentored a team of **10–15 contributors**, coordinating architecture, onboarding, and open-source community processes.

## SKILLS

---

**Languages:** TypeScript/JavaScript, Ruby, Python, C#, Go, SQL, HTML, CSS/SCSS

**Frameworks & Libraries:** Ruby on Rails, React, Node.js, Next.js, Redux, Vite, React Native, .NET Core, TailwindCSS

**Infrastructure:** AWS, Kafka, Docker, Kubernetes, Terraform, Ansible, PostgreSQL, MongoDB

**Focus Areas:** Distributed Systems, Data Pipelines, IoT Platforms, Performance Engineering, Developer Tooling

## EDUCATION

---

### The University of Texas at Dallas — Master of Science in Computer Science

Dallas, TX  
August 2021 – August 2023

Major: Systems · GPA: 3.6/4.0

**Relevant Coursework:** Operating Systems; Distributed Computing; Cloud Computing; Database Design

### National Institute of Technology, Kurukshetra — Bachelor of Technology, Electronics and Communication Engineering

Sonepat, India  
July 2016 – May 2020

GPA: 8.0/10.0