

# Swarnnika RAJ Singh

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## Technical Skills

**Frontend:** JavaScript (ES6+), TypeScript, React.js, Next.js, Redux, TailwindCSS

**Backend:** Node.js, Express.js, Golang, Python, REST APIs, WebSocket, Microservices, Gin-gonic, Gorilla-mux

**Cloud & DevOps:** AWS (Lambda, ECS, S3, CloudWatch), Azure, GCP, Docker, Kubernetes, CI/CD, Terraform

**Databases:** MongoDB, PostgreSQL, MySQL, Redis, DynamoDB, Firebase, Mongoose, Sequelize, DBMS

**Tools & Frameworks:** Git, Redis Queue, Redis Pub/Sub, WebRTC, FFmpeg, Jest, Cypress, Serverless Computing

**Others:** Event-Driven Architecture, Multithreading, OOPS, OS, Networking, AI Integration (OpenAI, LangChain), RAG

## Experience

### US Technology (UST)

Jun 2024 – Present

Software Development Engineer-III

Bangalore(India)

- Led the migration of on-premises applications to **AWS cloud** (AWS Lambda, ECS, S3), cutting infrastructure costs by **40%** while improving average response times from **800 ms** to **300 ms** across **10 microservices**.
- Architected a **CloudWatch-to-S3 data pipeline** integrated with **Amazon QuickSight**, accelerating data ingestion by **20%** and enabling real-time analytics for **200+ internal stakeholders**.
- Developed **scalable microservices** in **Golang** and **Python**, achieving a **30%** performance boost through concurrency optimizations, **containerization** (Docker), and orchestration (**Kubernetes**), resulting in **99.98% uptime**.
- Built a Retrieval-Augmented Generation (RAG) chatbot with **OpenAI** and **LangChain**, enabling intelligent document searches.
- Mentored junior developers via thorough **Git-based code reviews**, introduced **CI/CD** pipelines, and upheld **DevOps** best practices, raising **test coverage from 70% to 90%** in under **6 months**.

### HealthWorksAI

Dec 2022 – May 2024

Software Development Engineer-II

Boca Raton, Florida (Remote)

- Architected a **no-code analytics dashboard** using **React.js**, **Node.js**, and **TailwindCSS**, broadening data accessibility to **15+ remote teams** and reducing development cycles by **40%**.
- Implemented **Microfrontend Architecture** using **Webpack Module Federation** to break down a large monolithic frontend of product Data-Cube into independent applications (microfrontends) developed and deployed separately.
- Built new Platform Application, a **central hub for accessing company products** and services from a single personalized interface, resulting in a **50% increase** in user engagement.
- Implemented authentication, authorization, user logs analytics, security, and remote application integration via **iframe**.
- Implemented **Redis Queue** for distributed tasks, enhancing **API response times by 25%** and capable of supporting **10,000+ daily requests** through event-driven architecture (WebSocket, Pub/Sub).

### Omnicell

Mar 2022 – Aug 2022

Software Development Engineer-I

Bangalore (India)

- Developed a **streamlined ticketing system** in **Node.js** and **React.js**, reducing **issue resolution time by 20%** and handling capacity of **250+ concurrent agent tickets**.

## Key Projects

### AI-Powered Content Creation Platform (Gentuber) ([link](#))

- Launched a **subscription-based platform** with **Razorpay** integration, attracting **20+ active subscribers** with monthly plans.
- Developed **serverless backend services** on **GCP Functions**, supporting **100+ daily content-creation tasks** with minimal overhead and near-instant scaling.
- Integrated **multilingual AI models** (OpenAI) for **script generation**, **subtitle creation**, and **SSML-based voice-overs**, enabling localized content in **30 languages** for a global and Indian audience.
- Established secure user authentication and subscription management, maintaining payment failures below **5%** and minimizing churn through robust **cloud-based security**.

### AI Powered Real Time Chat Application ([link](#))

- Developed a **real-time chat platform** with **WebSocket**, **Next.JS**, **Typescript** enabling **users** to exchange messages at **low latency** and introducing **face authentication using AWS Rekognition** for secure logins.
- Integrated **WebSocket** for low-latency messaging and offered editing capabilities for transcribed content.
- Integrated **voice transcription** for enhanced accessibility, reducing average chat session time by **30%** and providing convenient **editing capabilities** of transcribed text.

## Education

National Institute of Food Technology Entrepreneurship and Management

Aug. 2017 – Jun 2021

Bachelor of Technology in Food Engineering (8.3 CGPA)

Sonipat, India