

Samrat Man Singh

Work

Product Engineer at Turn.io, Remote, April 2025-Present

Turn.io helps healthcare organizations deliver patient engagement, automation, and telehealth through WhatsApp.

- Implemented WebRTC-based **WhatsApp Calling** support for telehealth appointment workflows.

Full Stack Software Engineer at [Vara](#), Berlin, Germany, May 2021-May 2024

- **Consensus Conference**: extended mammography viewer to enable multiple radiologists to report on a mammography.
- **Supervision**: extended reporting UI to enable reports from newer radiologists in a clinic to be reviewed by senior radiologists.

Software Engineer Consultant at [Nilenso](#), Bangalore, India, January 2018-February 2021

I worked as a consultant in the **match-making team at Gojek**(ride-hailing company in South-East Asia), where I was involved with:

- **Multi-tenancy**: moving from deployment-per-country to having a single deployment serving traffic from multiple countries
- Publishing high-throughput, granular data using Kafka about driver allocation decision-making
- participated in the **on-call rotation**, responsible for the uptime of mission-critical services

Software Engineer at [Helpshift](#), Pune, India, February 2014-December 2015

- Wrote a system for triaging incoming customer support tickets based on user-defined filters.
- Wrote backend services for features to help customer service agents work faster.

Projects

[emlx](#) 2025

- An Nx backend for Apple's MLX array framework.
- Supports CPU and GPU tensor operations on Apple Silicon Macs.
- Implemented in **Elixir and C++**

Rust compiler contributions

- I've made a few minor contributions to the Rust compiler and toolchain.
- Improvements to suggestions made by Rustc: <https://github.com/rust-lang/rust/pull/71617>
- Contributed improvements to IO syscall handling in [Miri](#)(tool used for catching UB errors in unsafe Rust code blocks)

[rug](#) 2019

- A stripped-down implementation of Git that is "self-hosted"(ie. rug's source code is versioned using rug itself)
- Implemented in **Rust**

Blog

Technical writing

- Recent posts cover real-time audio/video pipelines, ML model integration in Elixir, and storage internals.
- Notable posts include [building a Membrane pipeline for Google Gemini](#), [running ML models in Elixir with Pythonx](#), and [an article on disk-based hashtables](#)

Contact

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Skills

- Professional experience working with **Elixir, Clojure, PostgreSQL, WebRTC, Git**
- Have also used: **Rust, Typescript, Python, Java**