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Fenil Jain

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TECHNICAL SKILLS

Tools: Git, Docker, Kubernetes, Redis, Postgres, RabbitMQ, gRPC, HTML/CSS, ReactJS, NodeJS, Flutter, Vim, Tmux, GStreamer, Ffmpeg
Languages: Rust, Golang, Typescript, Javascript, Dart, C, C++, Python

EMPLOYMENT

Dyte	**Software Development Engineer**	**September 2021 - Present**

WebRTC - WebSockets - GStreamer - ffmpeg - Livestreaming - Golang - Typescript - Rust - Kotlin - FFI

- Scaled socket layer by a scale of **116x**, improving worst case response times from **5-10s to 0.022s** and average from **0.35s to 0.003s** alongside **reducing error rates** drastically by optimizing data access patterns, evolving APIs and removing locking.
- Led work on stability of socket layer, backbone of media and room management core workflows. Established **quick iteration development**, **testing suites**, better ergonomics using **incremental refactors**.
- Led development of **livestreaming** product in the company, overseeing its evolution from conceptual stage to taking lead on all-round development and finally **launching** it as another vertical, contributing to **revenue** by **50%**.
- Writing **FFI bindings** of libmediasoupclient for usage in Android/iOS mobile SDKs and maintaining WebRTC sources for the same. This became the **foundation** of all mobile SDKs in the company, a necessity for all **enterprise customers**.
- Developed call statistics collector library in **Kotlin Multi Platform** for Core SDKs.
- Worked on building dev tooling and evolving it alongside the team while fixing bugs/adding features to stream recording service using **GStreamer** in **Rust**.
- Built and actively helped maintain billing, recording and usage tracking services in **Typescript**.

Appointy	**Software Development Intern**	**Fall 2021 – July 2021**

Golang - gRPC - GraphQL - CodeGen

Responsible for working on the company's backend in golang, added features like **complete paypal integration** for third-party vendors to take benefit of all features provided by paypal, **internal code generation tools**, **iCal feed services** and other misc tasks.

Winuall	**Software Development Intern**	**October 2020 – March 2021**

Golang - Mongo - Node

Responsible for developing the company's marketplace (Online Learning Platform for independent/established tutors to students) backend and surrounding infrastructure. Worked with **mongodb** as a primary database. Languages used were **golang** for almost all tasks and some small node **microservices**.

EventBeep	**Software Development Intern**	**April 2020 - June 2020**

Flutter - GraphQL - Hasura

My role as a **flutter** developer was to add features as well as shift the company's current faculty app's architecture to clean architecture following test and **domain driven** design principles.

OPEN SOURCE AND PROJECTS

Rust Analyzer   Rust - LSP - Compilers - IDE

- Developed a complex assist: **Extract To Module** and worked with the community to improve and maintain it.
- Bug fixing sprees in various subsections like **refactoring**, **diagnostics**, **assists**, **parser**, **completions**, etc. [contributions]

Rust Clippy   Rust - Linter - Compilers - IDE

- Bug fixing in various **lints** provided by clippy. [contributions]

Dead Simple Shell (DSS)   Rust - POSIX - Shell - Compilers

- A POSIX compatible shell from **ground up** in **Rust**, implemented a lexer, parser and shell engine from scratch covering basic command execution, piping, squirrel/direction operators, job control, etc.

Oxy   Rust - C - Compilers

- A programming language with two implementations, **tree walking in Rust** and **bytecode interpreter in C** following inspiration from Crafting Interpreters.

Operators to Postgres and MariaDB   Database Internals - C - C++

- Projects of adding new **inbuilt** `div_and_mod` **custom operator** in Postgres and Mariadb in Phil Eaton's hack week

Websocket Smallest Binary   Golang - Websockets

- A solution of **500 bytes** to Dyte's hiring challenge of developing smallest ws client to receive message and reply to server