Parth Desai

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About Me

I am polyglot engineer with 8 years of experience in designing server side solutions and 3 years of experience implementing core blockchain components. I have built several scalable projects from scratch. Some of them handle millions of users every day without any hiccups.

For the past three years, I have been working in the blockchain domain. My main area of focus is consensus algorithms, gossip protocols, and transaction execution environments. I am familiar with codebase and architecture of several blockchains like ethereum, tendermint, solana, substrate, and loomchain.

Experience

Chorus One — Remote
Senior Engineer — Feb 2020 - Present

- Currently working on building a bridge between substrate and cosmos chain using rust and go.

Solana — Remote
Senior Engineer (Contract) — August 2019 - Present

- Improved transaction execution environment to add functionality that enables validators to earn fees when they process transactions.
- Demonstrated a security attack on the consensus algorithm using a testing framework.

Loom network — Remote
Platform Architect — Jun 2018 - August 2019

- Implemented custom tendermint reactor, which allows a developer to write managed distributed oracle.
- Developed custom hashicorp vault plugins for secure private key storage, allowing non-crypto users to sign-up easily.
- Developed transfer gateway oracle to securely transfer assets between ethereum and loom network's plasmachain.

Indus OS — Mumbai, India
Lead Software Engineer — Nov 2016 - Jun 2018

- Implemented an advertisement server using microservices architecture from scratch, allowing the company to serve 300k ads per 5 minutes.
- Improved server latency of the AppBazaar project from 4 seconds to 200 milliseconds using layered caching in Redis.
- Implemented an Attribution server from scratch to record ad attribution in real-time.

Super.jobs — Mumbai, India
Software Engineer II — Jul 2015 - Nov 2016

- Built a resilient job distribution framework, to distribute tasks among multiple jobs. Which allowed the server to delegate a heavy task and improve app UX.
- Revamped entire flow and architecture of the app login, added a provision to connect to third-party authentication providers like facebook and google, which improved sign up rate by 30%.
- Built a recommendation system, which sorts available candidate pool according to recruiter's criteria. This boosted user retention by 24%.

Safety Changer — Pune, India
Software Engineer — Jun 2012 - Jul 2015

- Written custom single sign-on solution for the company, with pluggable and modular architecture, Which helped our company to develop new distributed components quickly without worried about auth.

- Co-designed and implemented a generic notification engine in golang, that uses a producer-subscriber method to configure and send out notifications to different channels. So, We were quickly able to roll out new notification channels (e.g. email, SMS), and new notification types in little or no time.

SKILLS

Programming Languages (Proficient):	Rust, Go
Programming Languages (Familiar):	Javascript, Python, C/C++, C#
Technical Knowledge:	Blockchain, System Architecture, Algorithms and Data structures

PROJECTS

UThread *C, Pthread*   https://github.com/ParthDesai/uthread
A pre-emptive and priority driven threading library for linux.

USH *C*   https://github.com/ParthDesai/ush
USH is a minimal shell, that supports basic command like cd, nice etc. Ush also supports pipelining two or more commands.

Best match search algorithm *Javascript, Node.js*
https://github.com/ParthDesai/best_match_algorithm_demo
This project demonstrates the use of an Adaptive algorithm to find optimal choice for candidates.

EDUCATION

Bits Edu-Campus   Vadodara, India
B.Tech Computer Science   Jun 2008 - Jun 2012