

Sinan Muhammed

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EXPERIENCE

- **Bud Ecosystem** New York, US · Remote
Staff Engineer Sept 2025 – Present
 - Wrote K8s operator to optimize startup time (40 - 400% performance gains on production LLM workloads)
 - Implemented fault tolerant, high availability databases, storage solutions, and automated backup systems.
 - Identified and remediated vulnerabilities, Code Reviews, Ensure project follows industry best practices.
 - Integrated application and cluster telemetry/monitoring via OpenTelemetry, and Automation pipelines.
 - Led complete Infrastructure as Code (IaC) migration (Terraform, BareMetal, NixOS, K8s, VXLAN, BGP).
 - Built various applications and internal tools to improve overall developer experience and efficiency.
- **NocoDB** San Francisco, US · Remote
Development and Operations Engineer Sept 2024 – Sept 2025
 - Built a Managed Hosting Platform for NocoDB using Typescript, Nix, and AWS.
 - Led the AWS Infrastructure as Code (IaC) Transition using Terraform and Nix.
- **Google Summer of Code (GSoC)** Mountain View, CA · Remote
Software Development May 2024 – Sept 2024
 - Research and Build C software for Precedence Constrained Knapsack (PCKP, scheduling optimization).
 - Profile and optimize software to meet production performance requirements (pthreads, custom hash table).
 - Write tests using Meson (Unit Tests, C) and NixOS testing framework (Integration Tests, Nix).
- **NixOS** Remote
Open Source Software Maintainer Nov 2023 – Present
 - Fixed various bugs in NixOS networking stack (DNS, Interfaces).
 - Write and maintain tests, packages, and NixOS Modules.

PROJECTS

- **namescale** Go, Nix
Zeroconf Wildcard DNS for Tailscale
 - Headscale compatibility.
- **redq** C, Go, Linux eBPF, Nix, SQL, TypeScript
Network observability and firewall using eBPF
 - Bandwidth and session based usage tracking per device, activity detection.
 - DNS filtering, and MAC filtering.
- **mpvsub** Lua
Automatic subtitles for mpv
 - Purpose made fuzzy matching algorithm.
 - No API keys, or accounts needed, native implementation with minimal dependencies.
- **npass** C, Nix, D-Bus, SQL
A passwordstore and Freedesktop.org Secret Service API implementation
 - Backward compatibility with existing unix passwordstore databases.
- **ctfbox** LXC/Containers, Lua, SSH, Nix/NixOS
Declarative Linux environments for Cochin University Dhishna CTF
 - Automated thin GNU/Linux environment provisioning with user sign up.

CERTIFICATIONS

- **Hurricane Electric IPv6 Certification** Feb 2024
<https://www.he.net/>

EDUCATION

- **Cochin University of Science and Technology** Kochi, India
Bachelor's Degree in Computer Science Sep 2021 – Jul 2025