

Nithish Karthik

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EXPERIENCE

KUBEVIRT | GOOGLE SUMMER OF CODE INTERN

May 2023 - Sep 2023 | Remote

- Designed and implemented a tool utilizing eBPF and Falco to generate seccomp profiles for Kubernetes pods, enhancing system security by enforcing kernel-level restrictions on pod access to unauthorized resources. Github - k8s-seccomp-generator.
- Researched different technologies like and identified the best approach for automating seccomp profile generation.
- Conducted comprehensive research on various technologies, including Sysdig, Falco and OCI hooks to determine the optimal strategy for automating seccomp profile generation.

LAYER5 | SOFTWARE ENGINEER

Jun 2022 - Jan 2023 | Remote

- Implemented core features like drag-and-drop, tooltips and context-awareness in Meshmap, the flagship product of Layer5, using XState, RJSF and CytoscapeJs.
- Refactored and Re-architected the frontend application using Redux, NextJS, MUI and XState which improved the performance and maintainability of the codebase.
- Developed the Docker Desktop extension for Meshery using the extensions-sdk which increased discoverability of the project by 42% (user traffic).

MESHERY | LFX INTERN

June 2022 - Sep 2023 | Remote

- Optimized the schema generation flow making it 8.5x faster using Cuelang's lightweight code generation feature instead of a node binary (thereby avoiding the node js runtime bootup time).
- Refactored the API layer and implemented GraphQL subscriptions to get real-time updates which resulted in a more confident user experience and improved debuggability.
- Created a spec (that is currently being implemented) that proposes a global model for ensuring consistent communication across the different architectural components.
- Refactored the data layer by migrating from MySQL to PostgreSQL that resulted in an improved scalability and maintainability.

MESHERY | OPEN SOURCE MAINTAINER

Oct 2021 - Dec 2023 | Remote

- Interacted with other open source maintainers (like Docker) to improve project scope and explored possible integrations.
- Reviewed PRs and fixed critical bugs.
- Hosted weekly meetings and spoke about Meshery in conferences to encourage open source contribution.
- Configured and maintained the release cycle of the project using Github Actions and Workflows.

MYDREAMCLASS | TECH LEAD & SOFTWARE ENGINEER

Apr 2021 - Jun 2021 | Bangalore, India

- Worked on building a streaming platform for educational content using AWS services like VOD, RDS, EC2, Amplify etc.

EDUCATION

IIT BHU

IDD IN METALLURGICAL

ENGINEERING

Sep 2025 | Varanasi, India

Cum. GPA: 8.51 / 10.0

LINKS

Github:// sudo-NithishKarthik

LinkedIn:// nithishkarthik

SKILLS

PROGRAMMING

Frontend Technologies:

Next.js • Material UI • Cytoscape.js • Gatsby • XState • WebAssembly

Backend Technologies:

Node.js • Express.js • MySQL • PostgreSQL • MongoDB • GraphQL • Docker • Kubernetes • Linux

Programming Languages:

Javascript • Typescript • Golang • Rust • Python • C • Elmlang

