

Kamalavelan

DEVOPS ENGINEER · FUNCTIONAL FULL STACK DEVELOPER · FREE SOFTWARE ADVOCATE

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"All genuine knowledge originates in direct experience."

Skills

Programming	Python, Clojure, Go
Back-end	Django, Flask, Clojure
Front-end	jQuery, Bulma, Tailwind
CMS & Wiki	Wordpress, Wagtail, dokuWiki, Ghost, Drupal, Hugo
Sysadmin	Ansible, Bash scripting
Linux & BSD	Ubuntu, Arch Linux, OpenSUSE, Debian, Gentoo, FreeBSD
RDBMS	Postgresql, MySQL, MariaDB, SQLite
NoSQL	MongoDB, Elasticsearch
Networking	Fail2Ban, iptables, LetsEncrypt, Tor, ufw, OpenSSH, rsync
Cloud Native	Kubernetes, Hashicorp Consul, Helm, Hashicorp Vault, Terraform
Monitoring & Logging	Signoz, UptimeKuma, Prometheus, Grafana, Promtail
Security	SonarQube, trivy, OWASP 10, Vault, TeleportSSH
Containers, CI/CD	Docker, Docker Compose, Jenkins, Gitlab, Shell Scripts
Build Systems	GNU Make, cmake, Leiningen, Arch Build System
Other Softwares	Emacs, Inkscape, Git, pandoc, graphicsmagick, ghostscript

Experience - 7+ Years

Akamai Technologies India Pvt. Ltd.

SENIOR SITE RELIABILITY ENGINEER

- Worked for observability and reliability of the Managed Databases platform for Linode
- Wrote python based observability services for monitoring and alerting, with integration to Grafana
- Automated sanity testing of database provisioning via the public API to monitor for downtime and unexpected behaviours
- Worked to resolve user queries to onboard applications on to the internal app platform
- Supported migration onto Rancher based Kubernetes app platform

Bengaluru, INDIA

Sep. 2023 - Present

AVR Edgenetworks Pvt. Ltd.

LEAD DEVOPS ENGINEER

- Responsible for the performance, security, reliability of the multi-tenanted microservices SaaS platform
- Led migration of the enterprise SaaS platform (20+ microservices) into K8s on Azure Kubernetes Service (AKS)
- Led ISO 27001 and SOC-II Type 2 compliance audits.
- Worked with development team to support legacy platform to migrate onto the newer platform with near zero-downtime
- Led the

Bengaluru, INDIA

July 2022 - Sep. 2023

AVR Edgenetworks Pvt. Ltd.

SENIOR DEVOPS ENGINEER

- Responsible for the performance, security, reliability of the multi-tenanted microservices SaaS platform
- Automated SAST and reporting for codebases using SonarQube
- Created CI/CD pipeline for products across dev, testing and production environments with triggers for automated failovers and rollbacks
- Standardized and secured docker containers for the new-gen product stack across 14 microservices
- Implemented extensive inter-services monitoring
- Implemented data pipeline for streaming data from production to facilitate datascience teams
- Worked closely with developers to architect the microservices for performance and security by design
- Responded to Log4J group of vulnerabilities across 13 environments within 48 hours for all services
- Analyzed and optimized MongoDB queries, indexing across product stacks
- Analyzed and optimized Elasticsearch queries, sharding across product stacks
- Worked to implement controls for ISO 27001 and SOC 2 Type 2 and get the org certified for the first time

Bengaluru, INDIA

July 2021 - July 2022

AVR Edgenetworks Pvt. Ltd.

DEVOPS ENGINEER

Bengaluru, INDIA

Dec. 2020 - Jun. 2021

- Handled ops, security, compliance for single-tenanted production environments for HCL, Virtusa & Wipro
- Reduce human intervention in production using bash scripts & Ansible
- Resolved production issues with blameless RCA and applied permanent fixes
- Standardized configurations & procedures across environments
- Assessed client requirements to formulate, acquire, provision & deliver whole environments
- Participated in infrastructure cost optimization and reporting
- Answered infosec compliance questionnaire from clients for annual and special reviews
- Analyzed and optimized PostgreSQL queries

Coopon Scitech LLP

PARTNER, SOFTWARE ARCHITECT

Puducherry, INDIA

Sep. 2019 - Sep. 2020

- Contracted to migrate French Govt research institute's legacy Drupal to mobile responsive Django website
- Processed OSM data into GIS shapefiles & GeoJSONs for UK based real estate analytics company
- Architected an OAIS compliant participatory platform for archiving of historical images for researchers, students
 - Co-developed & deployed the first stage
- Work includes business development, inter-organizational communications, statutory compliance
- Worked in migration, deployment & maintenance of various CMS including Wordpress, WooCommerce, Drupal, Wagtail

M/s. Coopon Scitech

SOFTWARE DEVELOPER

Puducherry, INDIA

Dec. 2017 - Sep. 2019

- Helped create a GIS based analytics platform for comparing profitable outcomes b/w renting & buying property
- Helped setup various specialized Wordpress sites for media house, educational agency, photographer
- Architected & co-developed offline-first mobile-first system for tracking of last mile community health services for JIPMER

Code

Column

AUTHOR & MAINTAINER

Clojure, Pedestal, JVM, PostgreSQL

Jun. 2019 - Present

- A FOSS template to ease bootstrapping of Clojure projects using Pedestal web server, customized for rapid application development
- Combines modules for password derivation, Access Control List, database connection pool & migrations
- Includes reusable web components in the likes of Django Forms
- Adheres to OWASP Web Security standards
- Submitted to the Clojure package repository - Clojars and Maven

FOSS Contributions

OSM iD Editor	Add India specific presets which improve QoL, Added details of local communities
ElementaryOS	Added Tamil translations to ElementaryOS desktop apps & Homepage
Archlinux User Repository	Maintained two FOSS packages - monocypher & w3ar
Archlinux Wiki	Created, updated wiki pages relating to troubleshooting Linux gaming
Go SDL2	Ironed out method to cross-compile Linux based libraries on Windows & Mac
OpenStreetMap	Mapped new areas of Puducherry by recording ground truth using mobile & desktop GIS tools Publicized an easy method to change the map's default language from English to Tamil, Hindi
Gentoo	Tested out latest releases & filed bug reports with corrections for build process Tested conformity of FOSS libraries to latest GCC standards

Community Work

Free Software Hardware Movement Puducherry

SECRETARY

Puducherry, INDIA

Nov 2020 - Present

- Coordinated weekly technical meetups & workshops
- Organized a hacktivist camp for budding free software enthusiasts to sensitize the social issues surrounding technology
- Organized 24-hour long hackathon for Software Freedom Day 2021
- Successfully petitioned the Lt. Governor to forgo mandate of Aadhar Card as the sole Pol for receiving the Covid19 vaccine
- Supported the incubation of a new GLUG in Cuddalore
- Increased the parallel tracks of community engagement from 1 to 3
- Mentored and followed up the coordination of GLUGs in 3 colleges
- Constantly engage with community members on technical, career and life mentorship

Free Software Hardware Movement Puducherry

EXECUTIVE COMMITTEE MEMBER

- Coordinated weekly technical meetups & workshops
- Led the online petition campaign in response to IT Ministry's RFC on draft policy
- Organized the 2018's annual exhibition - Software Freedom Day
- Participated as volunteer & speaker at various state level events
- Co-created, edited podcasts & blog posts communicating socio-technical issues
- Mentored multiple college students into programming & technical self learning
- Mentored 16 beginners into successfully completing Hacktoberfest 2020
- Organized FSHM's 2nd General Body Meeting with lectures by stakeholders from fraternal organizations

Puducherry, INDIA

April 2018 - Nov 2020

cr0n - Ashoka University's Computing Society

COFOUNDER & COORDINATOR

- Co-found Ashoka University's Computing Society
- Introduced around 50 people to code for the first time
- Facilitated awareness session about Net Neutrality in India
- Screened movies & led discussions about Aaron Swartz & Snowden

Haryana, INDIA

Jan. 2015 - Dec. 2015

Presentation

DevOps: An Introduction

SPEAKER

- Conducted sessions in Pondicherry University & Pondicherry Technological University
- Introduced devops and cloud computing to CS & IT students

Puducherry, India

Sep. 2023

FSHM's 2-Day Hactivist Camp for FOSS enthusiasts

SPEAKER & ORGANIZER

- Evaluated the idea of technology as not being neutral
- Presented the State of FSHM and projected the year's plan ahead

Puducherry, India

Jan. 2020

FSFTN's 2-Day workshop on Data Science & Artificial Intelligence using Python

SPEAKER | WHY FOSS? WHAT CAN FOSS DO FOR YOU?

- Introduced the four principles of Free Software, its history and impact
- Explained the relationship b/w FOSS & Career in Software Industry
- Highlighted the importance of GLUGs in building peer learning and student leadership

Dindigul, Tamilnadu

Oct. 2019

FSFTN's 3-day Tech Synergy Bootcamp 2k18

SPEAKER | WHAT IS OPENSTREETMAP? WHY DOES IT MATTER?

- Introduced OpenStreetMap & its techno-social relevance
- Practically illustrated the use of iD to perform arm-chair mapping
- Shared anecdotes and heuristics on correlating mobile based data & satellite imagery to reduce errors

Chennai, Tamilnadu

Oct. 2018

Free Software Movement Karnataka's Residential Camp for Young Activists

SPEAKER | WHAT IS INTELLECTUAL PROPERTY? HOW DOES IT RELATE TO FOSS?

- Explained different types of Intellectual Property - Copyrights, Patents & Trademarks
- Explained differences between FOSS licenses and how it facilitates FOSS as a concept
- Led discussions on the impact of restrictive patents on our everyday life
- Emphasized the need for permissive patents, open access, creative commons for an inclusive society

Beary, Karnataka

Jul. 2018

International conference on Cooperatives in the Changing World of Work (CCWW)

SPEAKER | UAUTO - AN ETHICAL ALTERNATIVE TO OLA/UBER

- Elucidated the need for an ethical alternative to Ola/Uber
- Explained the idea of platform cooperativism in context of FOSS communities & related business models
- Pitched the business model for subscriptions based ride aggregation platform & its challenges

Kozhikode, Kerala

Apr. 2018

Writing

FSHM Blog

EDITOR

FSHM Blog

Sep. 2018 - Present

- Wrote and circulated weekly newsletter on the activities of FOSS communities in TN & PY.
- Edited the blog's articles on tech, society, privacy, gender issues & perspectives.

Rendering non-default language in OSM-Carto standard map

OSM User Diary

AUTHOR

May 2018

- Highlighted an easy technique which allows the OSM Standard map to be rendered in languages other than English
- Was featured in Weekly OSM issue 409, the defacto newsletter for OSM community worldwide

Program Committees

2023 - Cur. **Secretary**, Free Software Hardware Movement Puducherry

Puducherry, INDIA

2020 - Cur. **Executive Committee Member**, Free Software Foundation Tamilnadu

Tamilnadu, INDIA

2019 **Signature Campaign Coordinator**, Right to Meme - People's response to IT Ministry's RFC on draft policy

Tamilnadu, INDIA

2018 **Event Coordinator**, FSHM's Software Freedom Day Exhibition 2018

Puducherry, INDIA

2018 - 20 **Executive Committee Member**, Free Software Hardware Movement Puducherry

Puducherry, INDIA

2015 **Cofounder & Coordinator**, cr0n - Ashoka University's Computing Society

Haryana, INDIA

2014 **Constituent Assembly for Ashoka University's Student Government**, Elected Member

Haryana, INDIA