HARSHVARDHAN KARN

+91 8759948684 | harshvkarn54@gmail.com
https://www.linkedin.com/in/harshvardhankarn/   https://harshvardhan.tech/   https://github.com/ibreakthecloud

SENIOR MEMBER OF TECHNICAL STAFF

AREAS OF STRENGTH

Software Engineering (Fullstack)	Microservices	Machine Learning	Cloud Computing

KEY ACCOMPLISHMENTS

- Developed topology graph for the visualization of landscape of virtual machines and containers in flagship product of Deepfence.
- Key participant in presenting products to customers and acquisition of new customers in the US.
- Automated whitelabeling of on-premise installation of MayaData flagship product Kubera.

EDUCATION

NSHM KNOWLEDGE CAMPUS – *Durgapur, West Bengal, India*
- Bachelor of Technology in Computer Science and Engineering (2014-2018)
  Relevant Courses: Data Structure, Algorithm, Databases, Software Engineering

PROFESSIONAL EXPERIENCE

DEEPFENCE INC. – Bangalore, India   **December 2020 – present**
Member of Technical Staff
- Used Neo4j to design and implement **topology graphs** for the display of **over 10,000 virtual machines** and associated containers and processes.
- Developed an **open source docker extension** for a module (SecretScanner - https://github.com/deepfence/secretscanner-docker-extension), which enables users to find **unprotected secrets** in container images or file systems present inside any locally present docker images.
- Key contributor and **primary maintainer** of the **five major open source** projects of Deepfence, *viz.***ThreatMapper**, **SecretScanner**, **YaraHunter**, **PacketStreamer** and **Flowmeter**.
- Developed a new framework for vulnerability scan workflow which improved speeds by **over two times** and furnished **over 25% richer** and more enhanced results.
- Using the **Louvain algorithm**, it detected communities in large topology and clustered them, resulting in an increase of scale to **more than 13x**, from **150 nodes to 2000 nodes**.
- Organized webinar on **GitOps for Istio Canary deployment**: Hardening CI/CD pipeline with GitOps and continuous security with **50+ attendees**.
- Webpack optimization to **improve the speed of build and development** performance of frontend written using React, by **more than 40%**.
- Cross compiled **8+ docker images** to support multi-architecture, **amd64** and **arm64**.
- Worked in the **Palo Alto**, California office of Deepfence to develop major enhancements in software and present product to prospective customers.

MAYADATA INC. – Bangalore, India   **July 2018 – December 2020**
Fullstack Engineer
- Developed core components of self-healing networks which learn from telemetry data from six continents to predict user experience issues in various forecast horizons and provide problem solving options.
- **3x International Speaker** at conferences like ContainerDays, Germany and Rejekts, United States
- **Led a team of 3 frontend engineers** and overhauled Kubera, a data resilience SaaS platform.

- Collaborated with the UX team for the design & development of new User Interface and Experience.
- Designed and developed kubernetes controller and operators for DMaaS, a Data backup and restore solution for persistent volumes with **5+ microservices** deployed across **3 different clouds.**
- Actively contributed to Chaos Engineering project LitmusChaos, a CNCF Incubating project.
- Coded the openebs.ci, a CI platform to run tests on 6 different clouds, with a total of **300+ tests running in 6 pipelines** for CNCF sandbox project OpenEBS.
- Explored and researched ARM devices such as Raspberry Pi, Renegade, LePotato (SBC) to develop and cross compile binaries and their docker images to **support 3 different architectures**.
- Learned several soft skills like, **Entrepreneurial**, **Leadership**, & **Problem-solving** under the mentorship of **Murat Karslioglu** (former VP of Products and Solutions Engineering at MayaData Inc.)

PERSONAL PROJECTS

- **InfraMon** (https://github.com/ibreakthecloud/infra-mon) (Oct 2020)
  Infra-Mon or Infrastructure Monitoring is a metric ingestion server. It records the cpu and memory percentage utilization against the IP address of the client in-memory.
- **Nullhash / KCM** (https://github.com/nullhash/kcm) (Oct 2020)
  Kube Config Manager, is a CLI tool that helps users manage multiple clusters by mapping the kubectl to the desired config file.
- **ContactBook** (https://github.com/ibreakthecloud/contact-book) (Oct 2020)
  Contact book is an go based contact server that allows to create contact with name and email, where email is unique.
- **Gql-payload** (https://github.com/ibreakthecloud/gql-payload) (Oct 2020)
  Automatic gql-payload returns the request body for the provided query or mutation in Go for GraphQL.
- **AJAX-Chat** (https://github.com/ibreakthecloud/AJAX-Chat) (Oct 2020)
  ChatBox made with AJAX and PHP.
- **IOPS Plugin** (https://github.com/ibreakthecloud/iops-plugin) (Oct 2020)
  Scope IOWait plugin is a Go application that uses iostat to provide host-level CPU IO wait or idle metrics in the Weave Scope UI.

TECHNICAL SKILLS

LANGUAGES :	Go, Javascript, Python, SQL	**PLATFORMS:**	Kubernetes (K8s), Docker, Linux, Ansible
TOOLS :	Git, VSCode	**FRAMEWORKS:**	EmberJS, ReactJS, AngularJS, Bootstrap

TALKS AND CONFERENCES

- **Speaker**:
  - ContainerDays. 2019, 2020 (Hamburg Germany)
  - CloudNative Rejekts 2019 (San Diego, NA)

- **Attendee**:
  - KubeCon + CloudNativeCon 2022, Valencia, Spain (Virtually)
  - BlackHat 2022, Las Vegas, Nevada (Virtually)
  - BlackHat 2021, Las Vegas, Nevada (Virtually)
  - Kubernetes Forum, 2020 (Bangalore , India)
  - KubeCon + CloudNativeCon 2019, San Diego, California (In-person)
  - CloudNative Rejekts 2019, San Diego, California (In-person)
  - Container Days 2019, Hamburg, Germany (In-person)

- **Other**:
  - Helped organize Hacktoberfest by DigitalOcean 2018 while in MayaData.
  - Gave multiple talks on different topics at small meetups organized at Microsoft and a few startup's office spaces.

APPEARANCES IN MAINSTREAM MEDIA AND BLOGS

- ContainerDays YouTube (https://www.youtube.com/watch?v=x82QDptkUtQ&feature=youtu.be)
- MayaData blog on Kubernetes (https://blog.mayadata.io/openebs/homegrown-kubernetes-on-arm)
- MayaData blog on provisioning Google Cloud with Kubernetes (https://blog.mayadata.io/openebs/provisioning-google-cloud-with-k8s-using-it-in-house-tool-kops)
- MayData blog on avoiding Git panic (https://blog.mayadata.io/openebs/provisioning-google-cloud-with-k8s-using-it-in-house-tool-kops)

SELECTED AWARDS AND RECOGNITION

- Spot Award - 2020
- Rookie of the Year - 2019
- Ownership Award - 2019

COMMUNITY INVOLVEMENT

- Contributed to LitmusChaos (CNCF Incubating Project), Kubernetes (CNCF Graduate Project), Deepfence, OpenEBS (CNCF Sandbox project), Anchore, IBM Watson, Cross Cloud CI (CNCF CI Project)