Chethan Kailashnath

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SUMMARY

- Result-driven Software Developer with over **5+ years of hands-on experience** in both research and industry settings.
- Proficient in a wide range of programming languages, including **Python, Java, and Golang**, as well as databases like **MySQL and MongoDB**.
- Experienced in frameworks such as **Flask, FastAPI, Node.js, Bootstrap, and Django, and web services like AWS EC2, JSON, and AJAX.**
- Proficient in all stages of the **Software Development Life Cycle (SDLC),** including requirements gathering, design, implementation, testing, deployment, and maintenance.

PROFESSIONAL EXPERIENCE

BayOne Solutions [Contract - HPE] August 2024 - Present
Software Engineer [Remote] Chicago, USA

- Developed and deployed a **scalable AAS Monitoring Tool** using **FastAPI (Python)** and **Next.js**, resulting in a **40% reduction** in manual infrastructure monitoring time across distributed environments.
- Integrated **real-time server health data**, **alert tracking**, and geolocation mapping with Leaflet.js, enhancing system observability and **reducing incident response time by 35%**
- Built custom **Apache Airflow** plugins and alerting systems using **Python** and **Flask**, improving monitoring, visibility, and reducing incident **resolution time by 40% across data pipelines**.

BayOne Solutions [Contract - CISCO] April 2024 – August 2024
Software Engineer - Cloud Remote] Chicago, USA

- **Upgraded Dash_Tool:** Converted Dash_Tool to support older Grafana 7 modules using Python3, enhancing tool compatibility and extending its lifecycle by 2 years.
- **Introduced Deploy Subcommand:** Added "Deploy" subcommand in Dash_Tool using Python3 and Grafana 10 API, enabling deployment to multiple environments and reducing deployment time by 40%
- **Implemented Pre-Validation:** Created the "Validate" subcommand to perform pre-validation of dashboards, alerts, and configurations before deployment to specified environments, reducing deployment errors by 30%.
- **Devised Custom Notification Policies:** Formulated custom notification policies using Python3 and Grafana 10 API, improving monitoring accuracy and response times by 25%

NOKIA Feb 2023 - May 2023
Lab Automation Intern (Python / Java) Naperville, USA

- **Engineered Log Collector Tool:** Designed a log collector tool using Java, Spring Boot, Python, and Golang to fetch logs from Kubernetes pods, including all containers in a given namespace. This customizable tool decreased log collection time by 50%.
- **Built Audit Tool:** Constructed audit tool for Kubernetes pre-deployment using HTTPS, TCP/IP, and FTP, reducing deployment failures by 30%
- **Resolved Kubernetes Issues:** Performed comprehensive troubleshooting and debugging of Kubernetes deployments, resolving critical issues and minimizing downtime, thereby maintaining uninterrupted service availability.

NOKIA Jul 2019 - Jul 2021
Software Developer (R&D) Bangalore, India

- **Spearheaded Microservices:** Assembled and maintained microservices for Life Cycle Management, Configuration Management, and Fault and Performance Management for Cloud Network Functions (CNFs), advancing towards zero-touch service.
- **Automated Installation Process:** Developed an automation tool using Python and Selenium WebDriver for installing TIAMS (platform for CFX-5000 call function) on servers, saving 3 hours of manual work per installation.
- **Optimized Certificate Authority Microservice:** Improved the certificate authority microservice for Configuration Management using Kubernetes, Java, Golang, and gRPC, reducing the resource footprint by 30% and achieving significant time savings.
- **Deployed Istio Service:** Implemented Istio service for efficient traffic management of egress and ingress within a Kubernetes cluster, enhancing configuration management capabilities.
- **Generated Performance Data Metrics:** Crafted comprehensive performance data metrics for the codebase and produced insightful reports, reducing average response time for the configuration management repository by 15%.

- **Handled Client Escalations:** Managed client escalations and coordinated efforts with three teams to address daily issues, ensuring timely resolution and maintaining high customer satisfaction.

SKILLS

Programming Languages: Python (Intermediate to expert),Java, Golang, Shell, C++, C
Database: MySQL, MongoDB, CRDB (containerized Redis DB), Basics of PostgreSQL
Network Protocols: HTTPS, TCP/IP, DHCP, DNS, FTP, SMTP, SNMP,SPI, SNMP
Frameworks: Fast API, Flask, Django, Node.js, Bootstrap
Web Services: JSON, AXIOS, AJAX, AWS EC2
DevOps: Docker, Kubernetes, Helm2, Grafana10/Grafana10API
Tools & Technologies: Postman, Selenium, gRPC, Celery (for MQ Processing), protobuff3
Operating Systems: Windows, Linux, Unix (MacOS)
Web Skills: HTML5, CSS3, JS (API, ES6), JIRA, Confluence, SAFe agile engineering method, Data Structures and Algorithms

EDUCATION

Illinois Institute of Technology, Chicago, USA — Aug 2021 - Aug 2023
Masters in Computer Science (MSCS) — Chicago, USA

PES University, Bengaluru, India — Aug 2016 - May 2019
Masters in Computer Application — Bengaluru, India

PES University, Bengaluru, India — Aug 2013 - May 2016
Bachelors in Computer Application — Bengaluru, India

PUBLICATIONS

- Nishanth Purushotham, **Chethan Kailashnath** & Dr Ivan Mutis (2023). Towards an Intelligent Automated Code Compliance System , i3CE 2023, https://ascelibrary.org/doi/abs/10.1061/9780784485224.007