**Lijo Kattuvallil Gervassis**

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# Professional Summary

Pragmatic engineer with a proven track record of sustainably achieving the appropriate level of reliability in the systems, services, and products across startup, corporate setups. Results driven Site Reliability / DevOps Engineer with extensive experience in architecting scalable, secure, and highly available systems across cloud and on-premises environments. Expertise in Azure, AWS, Terraform, and Kubernetes, with a proven track record of reducing downtime, optimizing performance, and driving automation. Adept at leading cross-functional teams, implementing Infrastructure as Code (IaC), and enhancing system reliability through cutting-edge observability and monitoring solutions.

# Certification

Microsoft Certified: [Azure Fundamentals](https://learn.microsoft.com/api/credentials/share/en-us/LijoKG-0135/E77C18AC9FED7A03?sharingId)

# Professional Experience

## Senior Site Reliability Engineer May 2022 – Present

*Tata Consultancy Services Ltd*  Harleysville, PA

*Client: Refinitiv US LLC- An LSEG business*

* *Key Skills:* Azure, Terraform, Kubernetes, Helm, AKS, Docker, Prometheus, Grafana, Datadog, Python, Bash, Next.js, TypeScript, Tailwind CSS, PowerShell, Azure CLI, JIRA, ServiceNow, GitLab, HA Proxy, MongoDB, YAML, RHEL
* Transitioned on-premises applications to Azure cloud, adopting cloud-native architecture principles and improving system scalability.
* Designed and implemented GitLab CI/CD pipelines with Helm Charts for Azure Kubernetes Service (AKS) and Azure VMs for managed databases.
* Developed robust disaster recovery strategies, achieving compliance with stringent RTO and RPO objectives.
* Automated monitoring and observability systems using Prometheus, Grafana, Datadog with BigPanda dashboard integration for unified view.
* Implemented Infrastructure as Code (IaC) using Terraform for Azure resource provisioning, with Key Vault integration for secure secrets management.
* Designed User Assigned Identities with Role-Based Access Control (RBAC) to ensure secure and efficient access to Azure resources.
* Participated in on-call rotational coverage and led Technical Recovery Calls during major incidents, ensuring resolution within defined Service Level Agreements (SLA).
* Reviewed proposed changes in Change Advisory Board (CAB) meetings to maintain system stability and minimize risks.
* Spearheaded knowledge-sharing initiatives, mentoring junior team members and fostering operational excellence.

## DevOps Engineer Jul 2020 – May 2022

*Tata Consultancy Services Ltd*  Eagan, MN

*Client: Refinitiv US LLC- An LSEG business*

* *Key Skills:* Azure, AWS, EKS, VCS, Kubectl, Docker, Terraform, Puppet, BigPanda, Python, Bash, Node.js, Microservices, Nginx, HA Proxy, Unix, YAML, GitOps, CI/CD
* Containerized on-premises application stacks to facilitate cloud migrations, improving deployment flexibility and scalability.
* Orchestrated CI/CD pipelines for microservices hosted on AWS, leveraging Nginx ingress controllers for secure external service access.
* Provisioned and managed Amazon EKS clusters using Terraform, streamlining infrastructure-as-code workflows and enhancing control plane management.
* Engineered Wide IP/DNS, HA Proxy based load balancer solutions for efficient traffic routing by enhancing fault tolerance and global traffic distribution.
* Implemented cross-region disaster recovery strategies using ELB and Route53 to ensure data resilience and high availability, reducing MTTR.
* Resolved critical cloud infrastructure issues related to networking, security, and performance in hybrid cloud and on-premises environments.
* Automated monitoring and health checks using Python and Rundeck, reducing manual intervention in incident management and troubleshooting processes.
* Leveraged AIOps platform – BigPanda to aggregate and correlate alerts, suppress noise for the legacy applications, custom webhooks to trigger alerts.
* Automated SSL/TLS certificate renewal processes using Bash scripts, reducing operational toil and improving security compliance.

## SRE Architect Aug 2017 – Jul 2020

*Tata Consultancy Services Ltd*  Eagan, MN

*Client: Thomson Reuters Inc*

* *Key Skills:* AWS, CloudWatch, Splunk, ELK, Puppet, IAM, SAML, OAuth, SailPoint, Ping Identity, Java, Python, PostgreSQL, React.js, Node.js, GitHub, RHEL
* Actively contributed to the solution design for migrating a legacy IAM platform to Ping Identity SSO (AWS-hosted), enhancing security, and reducing technical debt.
* Served as the Subject Matter Expert (SME) for the IAM migration, presenting strategies to internal and external Architecture Review Boards (ARB).
* Integrated security testing into CI/CD pipelines, automating policy enforcement to ensure compliance with privacy and regulatory standards.
* Adopted Splunk for centralized logging and Real-Time Alerting, significantly improving intrusion detection and forensic capabilities.
* Implemented chaos engineering practices, proactively identifying and addressing vulnerabilities, boosting system resiliency.
* Authored Standard Operational Procedures (SOPs) and runbooks, streamlining troubleshooting and enhancing incident response efficiency.
* Designed and implemented service level indicators (SLIs) by thoroughly analyzing system performance metrics and aligning them with user-centric outcomes.
* Defined service level objectives (SLOs) by balancing system reliability requirements with business goals and historical performance data benchmarks.

## Site Reliability Engineer Feb 2014 – Aug 2017

*Tata Consultancy Services Ltd*  Bangalore, India

*Client: Thomson Reuters Inc*

* *Key Skills:* IAM, MFA, SAML, OAuth, LDAP, SiteMinder, Python, PHP, Python, MSSQL, Reac.js, Java, Jenkins, SVN, WordPress, Scrum, IIS, Ubuntu
* Managed internal IAM platform operations, ensuring system stability, optimal performance, and uninterrupted access control.
* Implemented Symantec VIP MFA for SSO solutions, significantly enhancing platform security and user authentication processes.
* Conducted code- and network-level debugging to resolve escalated issues, minimizing downtime and improving user experience.
* Implemented structured logging to enhance observability by making logs machine-readable, searchable, and easier to analyze for faster issue identification.
* Led technical recovery calls, ensuring swift issue resolution and driving post-incident improvements to prevent recurrences.
* Automated employee feed data extraction processes using Python and SFTP integration, enhancing efficiency and data security.
* Reduced Mean Time to Resolution/Detection (MTTR/MTTD) by constantly improving playbooks and runbooks based on lessons learned from Postmortem Analysis.
* Integrated and customized WordPress plugins, themes, functions, and hooks, and successfully migrated company websites to AWS cloud.
* Participated in Agile SCRUM ceremonies, fostering cross-functional collaboration to support the development of resilient and scalable infrastructure.

## Front End Engineer May 2011 – Jan 2014

*Tata Consultancy Services Ltd*  Bangalore, India

*Client: Yahoo!*

* *Key Skills:* LAMP Stack, PHP, Node.js, JavaScript, Python, REST APIs, YUI, Git, RHEL
* Engineered Location Widget from the ground up, enhancing user experience with responsive design and seamless cross-browser and cross-device compatibility.
* Collaborated with Yahoo! properties to integrate location APIs, ensuring robust data integration and improved functionality.
* Developed advanced functionalities, including widget instrumentation, internationalization (i18n), location detection, and auto-complete search, improving usability for a global audience.
* Conducted rigorous cross-browser and cross-device testing, ensuring consistent performance and user experience across platforms.

## Full Stack Engineer Mar 2010 – Apr 2011

*BizHobNob*  Bangalore, India

* *Key Skills:* LAMP Stack, PHP, MySQL, jQuery, Git, Centos
* Engineered the platform from scratch, contributing to all phases of the Software Development Life Cycle (SDLC), from design to deployment.
* Built the application using an in-house PHP MVC framework, ensuring clear segregation of data, business, and front-end logic.
* Developed an intuitive UI for the web platform using HTML5, CSS3, JavaScript, jQuery, and Bootstrap, incorporating AJAX functionalities to enhance user interaction and responsiveness.
* Optimized the application for usability, search engine visibility (SEO), and accessibility, improving overall user satisfaction and discoverability.

## Full Stack Engineer Oct 2006 – Feb 2010

*iWeave Systems*  Kerala, India

* *Key Skills:* LAMP Stack, PHP, CakePHP, Python, MySQL, REST APIs, JavaScript, CSS, SVN, Fedora
* Collaborated with product owners to design and deliver user-facing products, aligning functionality with business requirements and user needs.
* Implemented REST APIs to enhance backend integration and streamline communication between services.
* Utilized MySQL with the CakePHP business logic layer to develop robust and efficient backend solutions.
* Developed solutions focused on scalability and optimized performance, ensuring systems handled increasing loads efficiently.
* Wrote well-designed, testable, and efficient code by adhering to industry best practices and software development standards.
* Created test cases and performed acceptance, regression, and functional tests. Logged identified system limitations in defect tracking system.

# Education

Bachelor of Technology in Computer Science and Engineering Jun 2002 – Jun 2006
Mahatma Gandhi University Kottayam, Kerala, India