Venkatesan Govindarajan

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EDUCATION

- **Technische Universität Ilmenau** — Ilmenau, Germnay
  Master of Science in Communications and Signals Processing; (Ongoing) — Oct. 2025 - Present

- **SRM Easwari Engineering College** — Chennai, India
  Bachelor of Engineering in Electronics and Communications; — Aug. 2017 - July. 2021

EXPERIENCE

- **Smartlead** — Sydney (Remote)
  DevOps Engineer — Feb 2024 - Jul 2025
  - **Infrastructure Automation**: Engineered AWS infrastructure for 10M+ daily email deliveries, achieving 300% volume growth and 99.99% uptime via multi-region load balancing and containerization.
  - **Cost Optimization**: Slashed costs by 15% ($500K USD) in FY 2024 by optimizing AWS Savings Plans, auto-scaling policies, and third-party server resource allocation.
  - **Cybersecurity Governance**: Spearheaded SOC2 Type 2 compliance as sole architect, redesigning 20+ IAM policies, implementing company-wide VPN for secure server and AWS access, and migrating Node.js credentials to AWS Secrets Manager, reducing vulnerabilities by 35% in third-party audits.
  - **PostgreSQL Migration**: Migrated AWS RDS to Aurora PostgreSQL for scalability, leveraging Boto3 scripts for load-based auto-scaling. Optimized DB with partitioning, indexing, and archived 18-month-old data to EC2 Citus clusters, cutting costs by 20%.
  - **DeepSeek Optimization**: Deployed and customized DeepSeek model, boosting email deliverability by 25% for daily sends across third-party servers using cloud-native architecture.
  - **Monitoring & Observability**: Implemented PagerDuty, Slack bots, and NewRelic for AWS, Smartservers, and Node.js applications, slashing incident response time by 50% and streamlining root cause analysis.
  - **Smartservers Management**: Managed and maintained 1500+ third-party servers for Smartservers feature, automating setup with Cloud-Init scripts embedding Docker, NewRelic logging, and firewall rules for robust scalability and security.
  - **CI/CD Pipeline Optimization**: Optimized CI/CD pipelines for Smartservers using SaltStack and Bitbucket Pipelines via Salt APIs, and parallelized AWS ECS deployments, reducing deployment time from 2 hours to 3 minutes with secure, scalable infrastructure-as-code configurations and agent-based health checks.

- **AuditCue** — Chennai, India
  DevOps Engineer — Oct 2023 - Jan 2024
  - **AWS Infrastructure**: Provisioned Development and Production AWS environments from scratch using Terraform, ensuring scalability and compliance with SOC 2 and ISO 27001 standards.
  - **Database Backup**: Implemented SQLite backup service with Litestream for continuous replication to AWS S3, enabling near real-time backups and fast recovery.
  - **Secure Deployment**: Built and maintained deployment servers adhering to STIG security policies; applied kernel-level sandboxing using systemd slices and chroot for Go services isolation.
  - **CI/CD Automation**: Automated build and deployment pipelines across multiple customer environments on AWS using Ansible and Fossil version control.
  - **Network Architecture**: Managed AWS EC2 instances within multiple secure VPCs; configured VPC peering and cross-region API connectivity for secure service communication.
  - **VPN Management**: Deployed and managed Tailscale VPN to secure service access and onboarded initial user groups for application connectivity.
  - **Logging and Monitoring**: Used Rsync to aggregate logs from systemd slices, stored logs on S3, and leveraged the ELK stack for observability and monitoring.

- **Comcast** Chennai, India
  DevOps Engineer *Dec 2021 - Oct 2023*
  - **AWS Migration**: Collaborated as part of a 3-engineer team to migrate 25+ applications from OpenStack to AWS, reducing latency by 15% for over 1.5 million users.
  - **Kubernetes (EKS) Migration**: Contributed in an 8-member team to migrate 30+ microservices from Kops to AWS EKS with Istio and Carpenter autoscaling, improving deployment speed from 12 to 5 hours per sprint.
  - **CI/CD Optimization**: Enhanced Jenkins pipelines using SaltStack, reducing build failures by 90% over 20+ sprints.
  - **EC2 Architecture Migration**: Led migration of critical EC2 application from x86 to ARM architecture, improving cost-efficiency and performance.
  - **Monitoring and Cost Optimization**: Automated 100+ alerts with Icinga, reducing incident response time by 50%, and lowered operational costs by retiring PagerDuty and consolidating alerting systems.
  - **Mesh Infrastructure**: Maintained Kafka, Spark, and orchestration infrastructure supporting 1.5M+ Mesh WiFi users with 99.95% uptime.
  - **Dashboard and Alerting**: Developed dashboards and real-time alerts that identified and resolved a critical 5-month API proxy bottleneck across teams.

- **Ayoconnect** Pune
  Software Engineer *Aug 2021 - Dec 2021*
  - **Cloud Environment Setup**: Provisioned scalable production environment on Google Cloud Platform (GCP) for a new project. Designed and implemented Apigee API Gateway to secure and manage service connections.
  - **Kubernetes Management**: Managed and updated Kubernetes microservices each sprint using Ansible and Rancher App, ensuring efficient container orchestration and continuous delivery.
  - **Custom Notification Service**: Developed Python scripts for a server notification system and created a custom integration service connecting GCP with Workplace to improve automation and communication.

PROJECTS

- **DeepSeek Email Deliverability Optimization**: Customized DeepSeek model at Smartlead, improving email deliverability by 25% for 5M+ daily sends using Python and AWS EC2.
- **PostgreSQL Data Archival Pipeline**: Led archival of 18-month-old data to EC2 Citus clusters at Smartlead, reducing AWS RDS Reader's month costs by 20% and boosting query performance by 30%.
- **SQLite Real-Time Backup Automation**: Implemented Litestream-based SQLite backup service at AuditCue, achieving 99.9% data recovery rate with AWS S3 replication.
- **EC2 ARM Architecture Migration**: Migrated EC2 application from x86 to ARM at Comcast, cutting compute costs by 25% and improving performance by 15%.
- **API Proxy Bottleneck Resolution Dashboard**: Built Grafana dashboards and alerts at Comcast, resolving a 5-month API proxy bottleneck, reducing latency by 40% on peak trrafic times for 1.5M+ users.

SKILLS

- **Programming Languages**: Python, SQL, Bash, Java, Go, JavaScript (Node.js)

- **Cloud Platforms**: AWS, GCP, OpenStack

- **DevOps Tools**: Kubernetes (EKS & Self-Hosted), Jenkins, Ansible, Terraform, SaltStack, Bitbucket, Prometheus, Grafana, ELK Stack, Tailscale, OpenVPN, Apigee, Istio

- **Other Technologies**: Kafka, Spark, Carbon/Graphite, NewRelic, PagerDuty, Postgres

LANGUAGES

- **English**: C1

- **German**: A1

- **Tamil**: Native