

# RAHUL BALI

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Dynamic and creative software engineer with over 2 years of experience in producing robust code for Cloud Infrastructure client companies. Eager to accelerate the DevOps at your organization with top-notch code, architecture skills. As a Cloud Automation Engineer, doubled code-efficiency of Cloud Practice Team, HCL Technologies; reduced time by 5 times and increased customer retention by 30% .

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## SKILLS

**Languages:** Powershell, Python, Bash, JavaScript, C++, SQL, Node.js  
**Cloud Technologies:** VMware vSphere, AWS, Azure, Google Cloud Platform(GCP), Terraform  
**Orchestration:** vRealize Orchestrator, vRealize Automation, Ansible, Docker, Kubernetes, Scalr CMP  
**M/C Learning:** Tensorflow, Keras, PyTorch  
**Code Build:** Jenkins, Azure DevOps

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## EXPERIENCE

- HCL Technologies Ltd, Noida** **Cloud Automation Engineer** **Aug 2018 - present**
- Cloud Infrastructure provisioning using Terraform and configuration management using Ansible. Deployed Kubernetes cluster and Jenkins pipeline using Terraform.
  - Picked up Scalr Cloud Management Platform in 15 days, started the work on developing DevOps Automation POC which later made into full blown Production of Unilever, reducing 45 days of server provisioning time to just 45 mins.
  - Streamlined the Automation process for 8 different technology teams; cutting time and human effort by resolving more than 3000 tickets per month.
  - Hosted seminars for colleagues on modern cloud technologies; released training cost by upto 85%.
  - Implemented the architecture for Cloud Management Platform - Scalr with Azure and AWS Public Cloud.
  - Developed and administrated automation services on Microsoft Azure, creating virtual machines, storage accounts, network security groups, application security groups and resource groups using ARM templates.
  - Utilized PowerShell scripts to automate the processes such as migration of VM to cloud providers, push network configurations, apply patches to the standard set of servers monthly, remediate vCenter failures using automate fix deployment in production.
  - Designed Logical Flow diagrams for client patterns on VMware infrastructure IaaS/PaaS for easy ingestion of the developed automation products.
  - Deployed high availability failover cluster for VMware vRealize Orchestrator with mssql cluster.
  - Designed and enhanced the VMware Orchestrator workflows with SOAP and REST API integration for Automating Infrastructure. Authored documentation for design and data flow.
- Punjab Engineering College, Chandigarh** **Research Assistant** **Jul 2016 - Jul 2018**
- Research in the field of Recommender Systems(ML) and conceived a thesis. Taught the courses of Theory of Automata and Software Engineering; created course on Recommender Systems.
- Click Labs Pvt. Ltd, Chandigarh** **Android Developer Intern** **Jan 2015 - Jul 2015**
- Jugnoo app is used by lakhs of people for their daily travel. Created alternate designs based on maps for food ordering section. Fixed many bugs, and pushed the code to production.
- Fiverr.com** **Freelance Software Engineer** **Jun 2013 - Dec 2016**
- Developed Java applications; Android Apps in Kotlin.
  - Create websites using WordPress; full fledged Django Websites.
  - Developed Macro enabled Excel sheets and used VBA to code form and automate series of operations.
  - Data Collection using Selenium for Java and Python.

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## EDUCATION

**Punjab Engineering College, Chandigarh** **Master of Technology** **July 2016 - July 2018**  
Thesis "Modeling Product Ratings and Reviews using Latent Factors to provide Recommendations using Amazon product reviews data set".  
Courses Advanced Algorithms, Neural Networks, Fuzzy Logic, Evolutionary Computation.

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## PROJECTS

Infrastructure Provisioning

*Create Infrastructure with Terraform*

**Tech: Terraform, AWS, Linode, TLS provider**

Using HashiCorp Language, created EC2 machines, Security Groups, NAT gateway, internet gateway, route tables, VPC, private/public sub-nets and ALB/NLB Load Balancer. Created special setup Network File System(NFS), Kubernetes cluster, Jenkins build server, Ansible master, etc. Created Migration setup to move containers from On-Prem to AWS ECS service.

Container Deployment with Kubernetes

*Deploying Highly Available Container Architecture Design*

**Tech: Kubernetes, Google Cloud Platform, Docker**

Deployed Nginx Server with application microservices, monitoring and logging on GKE cluster. Using services from GCP, GKE Cluster Autoscaling, HTTPS Load Balancer, Stackdriver, Cloud Audit Logs etc.

Backend for Doctor Patient Application

*REST API with JWT based authentication*

**Tech: Python, PostgreSQL, Flask, SQL-Alchemy**

API was developed as a generic back-end for a doctor-patient application. This implementation included authentication, video calling components using Jitsi server, and scheduling the meeting. EDIT: recently remade it using Typescript, Nodejs, Fastify, TypeORM and Postgres

Cloud Infrastructure Automation

*Handling Automation and Orchestration Design*

**Tech: vRealize Automation, VMware vSphere, JavaScript, PowerShell, Bash**

Configuring vRealize Endpoints, Fabric groups, Reservations, Reservation Policies, Approval policies, Blueprints, Entitlements and Services. Designing VMWare vRealize Orchestrator workflows for automating file share access requests

Infrastructure Provisioning/Deprovisioning

*Infrastructure Design & Architecture*

**Tech: Scalr CMP, Azure, AWS, Python**

Created a user experience to provision a Virtual Machine from a BMC Remedy request. VM contains Unilever Standard build policies, installed required software, Active Directory Domain joined, SCOM Monitoring enabled, Patching enabled. Later also, drafted and implemented a complete End to End Deprovisioning flow with all components removed and uninstalled. This included Azure, AWS disks, snapshots, etc. Also, scripted various API integration using Python's requests module.

Prometheus/Grafana Observability

*Monitoring Kubernetes cluster applications*

**Tech: Kubernetes, Prometheus, Grafana, MongoDB**

Made a monitoring solution for monitoring MongoDB by creating Custom Resource of Service Monitor, Daemonsets in Kubernetes. This implementation is done using the Helm Chart for Prometheus.

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## CERTIFICATES

Architecting with Google Compute Engine Specialization

Networking in Google Cloud Specialization

Architecting with Google Kubernetes Engine: Foundations

VMware Technical Sales Professional - Management Automation