BHARGAV LAKKUR KUSHA KUMAR

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# PROFESSIONAL SUMMARY

* I have 10+ years of software analysis, design, and development experience in Golang and Python, among other technologies.
* Extensive experience in developing and deploying web applications using Golang, focusing on microservices architecture and RESTful APIs.
* Proficient in full-stack web development, utilizing front-end technologies like React.js, Angular, and Bootstrap in conjunction with Golang back-end services.
* Hands-on expertise in implementing multi-threading and optimizing compute pipelines using Go routines in Golang.
* Skilled in cloud-based application deployment on AWS, leveraging Docker and Kubernetes for containerization and orchestration.
* I am experienced in working with databases such as PostgreSQL, MySQL, and MongoDB, integrating them seamlessly with Golang services.
* Adept at following Agile methodologies, contributing to all software development life cycle phases, from requirement analysis to deployment.
* Expertise in designing and developing Golang-based microservices, utilizing frameworks like Spring Boot, and implementing security with OAuth 2.0.
* Proficient in creating and maintaining API services using Golang, with experience in integrating third-party services and handling large-scale data processing.
* Extensive experience in writing and executing unit tests for Golang applications using JUnit and Mockito, ensuring code reliability and robustness.
* Skilled in developing user interfaces and enhancing user experience using modern front-end frameworks like Angular and React.js, alongside Golang back-end services.
* Experience working with message brokers like Apache Kafka, integrating them with Golang services for efficient data streaming and processing.
* Proficient in continuous integration and delivery practices, using tools like Jenkins, Git, and Maven to automate the build and deployment process for Golang applications.
* Strong experience using Golang to develop high-performance, scalable server-side applications, focusing on concurrency and parallel processing.
* Hands-on experience deploying Golang applications on Docker containers, configuring and managing AWS EC2 instances, S3 buckets, and Kubernetes clusters.
* Extensive knowledge of Agile and Scrum methodologies, actively participating in sprints, daily stand-ups, and retrospectives to deliver high-quality Golang-based solutions.

# TECHNICAL KNOWLEDGE

**Programming**: Scala, Golang, Java, Python, Spring Boot, Hibernate, Java2EE, NodeJS, and Rust

**Scripting:** ActionScript and Shell Scripting

**Web Design:** HTML, HTML5, CSS, LESS, JavaScript, jQuery, Bootstrap, AJAX, JDBC, JSON, PHP, JSP, Servlets, React JS, Freemarker, Thymeleaf, Tomcat, Spark, Maven, gRPC, and RESTful Web Services **Tools & Practices:** Linux (Terminal), Linux Administration, Android Studio, Unity, Git, SDLC (Agile), Buildkite, Airﬂow, Jira, Conﬂuence, LaunchDarkly and Raspberry Pi

Cloud: AWS, GCP, and Terraform

**Databases:** MySql, Microsoft SQL Server, Oracle SQL, and MongoDB (No SQL DB)

**Certiﬁcations:** Bootstrap - Coursera (February 2016), and Python – Edx (March 2016)

**WORK EXPERIENCE**

**Heap Inc., San Fransisco, CA 94104** May 2022 - Present (Software engineer II - Platform)

* Conceptualized and implemented multiple service endpoints, enhancing inter-service communications and

system efficiency, enabling the data science team to optimize their services

* Collaborated on enhancing a lifecycle manager for SingleStore DB, fine-tuning warmup caching to enable autonomous, efficient operations. This significantly streamlined database usage, ensuring robust, self- managing server functionality
* Swiftly addressed technical issues and system outages while being on-call. Employed in-depth analysis to identify root causes of outages, ideated and debugged solutions to ensure continuous 24/7 service operation
* Revamped incident communication automation in Slack and StatusPage, streamlining alerts for improved efficiency and targeted team updates during incidents, reducing unnecessary notifications and noise, and improving visibility
* Partnered with the success team to develop scripts that demonstrated value to end-users while also addressing technical requests such as data deletion
* I developed and maintained Scala-based web applications, ensuring high performance and scalability and contributing to the platform's overall robustness.
* Implemented and managed AWS services such as EC2, S3, Lambda, and RDS to optimize cloud infrastructure, leading to a 25% reduction in deployment time.
* We utilized Terraform for infrastructure as code (IaC) to automate the provisioning and management of cloud resources, ensuring consistent and repeatable deployments across multiple environments.
* Developed and maintained high-performance Golang-based microservices, focusing on scalability and reliability to handle increased user traffic efficiently.
* Built and enhanced web applications using TypeScript and Angular, improving code maintainability and reducing bugs by leveraging TypeScript’s robust typing system.
* I customized and extended Retool applications to create internal tools, enabling non-technical team members to interact with data more eﬀectively and reducing support tickets by 30%.
* Set up and optimized CI/CD pipelines using Jenkins and AWS CodePipeline, integrating testing and deployment processes to accelerate product releases.
* Implemented AWS IAM policies and VPC configurations to secure the cloud environment, ensuring compliance with industry standards and reducing the risk of security breaches.
* Deployed and configured monitoring tools like CloudWatch and Prometheus to track application performance and system health, enabling proactive resolution of issues.
* Designed and developed RESTful APIs in Golang, integrating them with AWS services to provide robust and scalable backend solutions.
* Conducted performance tuning and optimization for Golang applications, resulting in a 40% increase in processing speed and improved user experience.
* Successfully deployed and managed containerized applications using AWS ECS, enabling scalable and efficient orchestration of Docker containers, which improved application uptime and reduced operational overhead.

**Blue Green Brands, Cambridge, MA 02142** October 2017 - May 2022

# (Full stack developer)

* I worked as a full-stack developer for Blue Green Analytics, a SaaS product on AWS, specializing in mapping visitor journeys from initial visit to conversion. Spearheaded both front-end and back-end development.
* Developed a Slack integration with slash commands for real-time monitoring of cloud services, a key innovation in a small development team that streamlined operations and enabled scalable service maintenance
* Revolutionized ImageBot service using Docker, slashing processing time by over 85%, cutting costs by 33%, and markedly improving scalability and throughput
* Implemented a HubSpot Integration for Blue Green Analytics, enabling secure ingestion of client data and enhancing functionality by combining it with HubSpot's filters like contacts and companies, thus providing tailored data ﬂows for HubSpot users
* Ideated & implemented conversion rate optimization solutions for Fortune 500 clients, including a Geckoboard integration that consolidated metrics from Google Analytics, Blue Green Analytics, AppsFlyer, and Salesforce, saving executive time and streamlined data-driven decision-making processes.
* Led the development of Scala-based web applications, leveraging its functional programming features to improve code maintainability and performance.
* The core logic for Blue Green Analytics was written and maintained in Scala, ensuring efficient and scalable processing of large datasets and complex business logic.
* Led the development of a responsive and dynamic user interface using React.js, improving user engagement and reducing page load times by 30%.
* Architected and implemented scalable Golang microservices, enhancing the performance and reliability of core backend systems.
* Utilized Docker to containerize applications, ensuring consistency across development, testing, and production environments, which reduced deployment times by 40%.
* Designed and implemented solutions that scaled to handle increasing traffic and data loads, leveraging best practices in distributed systems and cloud-native architecture.
* Enhanced the codebase with TypeScript, improving code quality and maintainability while reducing runtime errors by 25%.
* Streamlined deployment processes by setting up CI/CD pipelines with Jenkins and Docker, automating testing and deployment, and significantly reducing manual intervention.
* Worked closely with cross-functional teams to integrate front-end React components with Golang APIs, ensuring seamless communication between services.
* Conducted performance tuning on Golang services, achieving a 35% improvement in response times and optimizing resource utilization.
* Architected and deployed cloud-based solutions on AWS, utilizing services such as EC2, S3, and RDS to ensure high availability and fault tolerance.
* Conducted regular code reviews and enforced best practices in React, Golang, and Docker, leading to a more maintainable and scalable codebase.

**Itslearning, Newton, MA 02458** January 2016 – September 2017

# (Full stack .Net developer)

* I have actively worked with C#, optimizing current approaches such as using dictionaries to cache data instead of making redundant database calls.
* I worked on keyboard navigation (just like Excel) from an accessibility point of view using JQuery.
* We have been working on production bugs. Instead of loading data on the client side simultaneously, we isolated commonly used nodes and worked with JS to append it only when necessary.
* To instantaneously grade students on the grade book, we made Ajax calls using appropriate Web API handling.
* Led the development of robust back-end services using C# and .NET, improving the performance and scalability of core applications.
* Utilized the .NET framework to build and maintain web applications, ensuring seamless integration with front-end components and back-end services.
* Implemented dynamic and interactive front-end features using jQuery, enhancing user experience and reducing page load times by 20%.
* Developed and executed comprehensive automated test suites using NUnit and Selenium, significantly improving the reliability and quality of software releases.
* Integrated automated testing into CI/CD pipelines, using Jenkins to streamline the build and deployment processes, reducing the time to market.
* Designed and developed RESTful APIs in C#, providing robust and scalable interfaces for various front-end applications.
* Refactored and optimized existing C# codebases to improve maintainability and performance, resulting in a 30% reduction in code complexity.
* Worked closely with front-end developers to integrate C# back-end services with jQuery-based user interfaces, ensuring seamless data ﬂow and functionality.
* Conducted performance testing using JMeter, identifying and resolving bottlenecks to ensure applications met high-performance standards.
* Utilized SQL Server for database management, writing efficient queries and stored procedures to handle large datasets eﬀectively.

**A N D Technologies Pvt. Ltd., Bangalore KA 560001** September 2012 - December 2014

# (Software developer)

* Developed applications for A N D Tech using Java and maintained the existing applications.
* Part of a team developing web applications using JSP and Servlets.
* Application testing for bugs and logic errors.

# Worked on “Faster Detection of Cardiac Arrhythmia for Remote Patients” for INTEL Corp.

* Led the development of back-end services using Java, focusing on building scalable and high-performance applications that meet the needs of the business.
* Utilized Bootstrap to create responsive and mobile-first web interfaces, ensuring a consistent and user- friendly experience across diﬀerent devices.
* Engaged in full-stack development by integrating Java back-end services with front-end technologies like Bootstrap and jQuery, creating seamless and interactive web applications.
* Leveraged the Spring Framework for dependency injection and transaction management in Java applications, enhancing modularity and maintainability.
* Developed and consumed RESTful APIs using Java, facilitating smooth communication between the front- end and back-end services.
* Worked with relational databases like MySQL and PostgreSQL, writing efficient SQL queries and integrating them with Java applications to handle large datasets.
* Managed code versions and collaborated with team members using Git, ensuring smooth integration and deployment of Java-based features.
* Implemented front-end enhancements using Bootstrap, focusing on improving the user interface and experience, which led to increased user satisfaction.
* Ensured that web applications developed using Bootstrap and Java were cross-platform compatible, providing a consistent experience across browsers and devices.
* Conducted performance optimization for Java applications, resulting in reduced execution times and improved application responsiveness.

**PROJECTS**

**Sequence board game (**lkbhargav.com/sequence.html**)** December 2023

* Developed a multiplayer Sequence board game in Rust, supporting up to 12 players with efficient concurrency management and cross-platform compatibility.
* Implemented complex game logic and a terminal-based interface, ensuring accurate gameplay mechanics and an intuitive user experience.
* Optimized performance using Rust’s async/await for low latency and responsive gameplay across all participants.

**Friday board game (**friday.lkbhargav.com**)** September 2021

* Successfully replicated and hosted the solo board game "Friday," showcasing game development, web hosting, and deployment proficiency. Utilized React and Rust for the back end to enhance and improve the user experience.
* Demonstrated self-initiative by independently managing the entire development lifecycle of the Friday board game replication. Overcame challenges through eﬀective problem-solving, highlighting adaptability and a commitment to continuous learning.

**Comprehensive YouTube Search** August 2018

* Leveraged YouTube API to search and find videos
* Came up with a clean filter box that allowed users to search for videos about one or more categories, while they could also have a custom value for the dislike ratio to see only what has been liked.

# JavaScript Library for Flash Animation July 2016

* This solves the problem of playing Flash animations on a mobile device.
* A simple algorithm was used to handle a series of images (Animation converted to images), and the SetTimeout JS method was used to play animations with varying speeds and other settings.

**Home Automation** May 2016

* It is a convenient way to control the lights at home with a web interface in less than 10 seconds.
* I imported the Pi4Led library into the Java Spring boot web application and gave logic to handle web requests as required, while Raspberry Pi controlled the LEDs based on the response from Web requests.

**Instant Messaging Application (**github.com/lkbhargav/www.babbleon-now.com**)** April 2016

* I worked on the Trie data structure to build a tree of 1000 good and bad words. Using this to search for words was faster and used in emotional intelligence, which gave predictions of each message by changing the background color of those messages.
* Used file streams in Java to send and receive Doodles, files, and messages by serializing and streaming in Client-server architecture.

**Weather Application (Pebble Smartwatch)** January 2016

* Reduces the time to check the weather by 75% by giving comprehensive data about the location.
* The application is straightforward, simultaneously predicting the weather for the next 30 hours.

**Little Katie** November 2015

* First-person controller shooting game with AI-enabled zombies tracking the player (made using Navmesh agent).
* I worked on keyboard controls to control the player while enabling many other add-ons.
* This game comprises diﬀerent challenges and requires the player to collect a certain number of coins to win.