AKSHAY NIMBAL

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PROFESSIONAL SUMMARY

- 5 yrs of experience facilitating the cutting-edge engineering solutions with a wide range of technical skills and expertise.
- Proven ability to leverage full-stack knowledge on the Software development life cycle to build a customer centric product and its delivery.
- Extensive experience in building proof of concept models using various tools and evaluate the alternative solutions to bring the best fit to the product.

TECHNICAL SKILL SETS

- **BackEnd**
  Java, Spring, Spring Boot, REST, Design Patterns, Multi-Threading, Hibernate, JPA, Node.js, Express.js, Guava Cache

- **FrontEnd**
  JavaScript, Typescript, Angular 7, HTML5, CSS/SCSS, i18N, React.js, Webpack, Grunt and Gulp

- **DevOps**
  Jenkins, SonarQube, Ansible, Docker, Nexus, Kubernetes, SVN, Git, AWS CDK, Terraform, NewRelic, Zabbix.

- **Build tools**
  NPM, Yarn, Maven, Ant

- **Databases**
  MySQL, MongoDB, DynamoDB, Redis

- **AWS**
  EC2, EKS, Lambda, Athena, SQS, SNS, RDS, S3, MSK, Redshift, VPC, IAM, Cloudwatch, Route 53, API Gateway

- **Servers**
  Wildfly 9+, Apache Tomcat, NGINX, HTTPD

- **Security**
  oAuth 2.0, Keycloak, Okta, OIDC, SAML, CryptoJs, AES, Spring security, OWASP Vulnerabilities.

- **Additional SkillSets**
  Apache Kafka, Apache Parquet, Python (pyarrow, pandas, numpy), Puppeteer, ElasticSearch, Apache Solr

EXPERIENCE

- **Cisco**   Hyderabad, India
  Software Engineer   *Mar 2019 - Present*

  ○ **Customer Interactions Database (CID) :** Worked on building a near real-time Centralized Transactions Repository with Apache Kafka (AWS MSK), Kafka Connect File Pulse, AWS Document DB, Lambda, S3, Guava Cache. This was a cross-product solution to allow customers to get the transactions stored in Files and Redshift. The TPS was improved from 7/sec to 320/sec using Batch Kafka polling, Multi-threaded processing, Batch upsert to the Database.

  ○ **AWS Lambda :** Developed a AWS Lambda serverless PDF Service in Node.js to generate personalized PDFs from the HTML using JavaScript runtime library Puppeteer, resulting significant cost savings against using a 3rd party service.

  ○ **AWS Athena :** Worked on migrating the transaction logs from RDS to S3 and querying through AWS Athena. This resulted in significant cost savings due to logs of size 1TB/month stored in RDS. Implemented Partition projections on a granularity level of minute-wise partitions which reduced the data scan size by more than 50GB in every Athena query resulting in improved performance and more cost-effective.

- ○ **Apache Parquet :** Developed a AWS Lambda service in Python to convert the log files stored in S3 to the Apache Parquet file format which stores the data in columns, using snappy compression. Used S3 triggers to invoke lambda. This significantly reduced our AWS Athena data scan size costs by 90%. Used pandas and pyarrow libraries for processing the parquet files.

- ○ **Angular 7 :** Worked on Angular 7 application to improve the performance and load time for about 70%. Load time of the application was significantly decreased from 30+seconds to <5 seconds. Implemented the tree shaking and optimized builds using the JIT compilation. Implemented gzip compression on the NGINX.

- ○ **Authorization and Authentication :** Designed and implemented Role based authorization to APIs in Spring using cached Role Permissions. Implemented Auth Guard in Angular 7 to authorize routes based on Role. Implemented a custom reusable structural directive to conditionally hide/show elements based on permissions attached to the route.

- ○ **Guava Cache :** Worked on reducing the dependency on AWS RDS for the customer facing web touchpoints by introducing the Guava Cache Framework. This improved the latency significantly. As part of this solution, logged the guava cache statistics asynchronously to the Database for monitoring.

- ○ **Session Replication :** Worked on the session replication when two or more Wildfly servers behind a ALB are running in a distributed cluster on two different physical devices. Infinispan was used to handle the distributed session level cache between the servers along with JGroups. TCP based JDBC ping protocol was used for node discovery.

- ○ **SAML :** Developed Proxy WAR for Multiple Identity Provider based SAML Authentication which was used across the teams for the client integration based on SAML. Supported for Idps like Microsoft Azure, Okta.

- ○ **DevOps & AWS EKS :** Developed the Jenkins Declarative pipeline scripts for the build and deployment lifecycle of 120+ apps. Simplified the build stage by converting all the apps from Ant to Maven. Used AWS CDK to synthesize the EKS cluster creation and automated the deployment of ALB ingress controller, IAM RBAC, application pods. Fine tuned the Horizontal Pod Autoscalar (HPA) for resource optimization.

- **Wipro Limited**   Pune, India
  Associate Consultant   *Aug 2017 - Mar 2019*

  - ○ **FrontEnd** Worked on Front End Development using Angular 4. Developed oAuth 2.0 session management (Cookies, Access Tokens) and implemented a method of renewal of tokens before expiry which was appreciated and utilized across other teams. OWASP Vulnerabilities on client side were handled, AEM and Omniture integration

  - ○ **Backend** Worked on Microservices in Node.js and Java Spring Boot.

  - ○ **DevOps** Worked on Setting up the Bamboo CI-CD plans to automate the deployment of docker containers on AWS EC2 instance which was orchestrated by using Rancher container orchestration and management platform.

EDUCATION

- **PES University**   Bengaluru, India
  Bachelor of Engineering in Electronics and Communication; GPA: 9.7   *Jun. 2013 – Jun. 2017*

AWARDS AND ACHIEVEMENTS

- Research paper named "FPGA Implementation of Space Based AIS" got accepted for presentation at an IEEE conference IC-ICTES, Bangkok.

- Stood 5th in "Security Code Warrior" among 60 teams from Australia, Singapore and India.

- Distinction award in all semesters.

- Represented in the Critical Design Review (CDR) of the Attitude Determination and Control System Team of student satellite PISAT at Indian Space Research Organization (ISRO) satellite center, Bengaluru.

DECLARATION

I assure that the details provided above are up to date and true as per my knowledge.