

# Aarish Ramesh

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## EDUCATION

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- **Birla Institute of Technology and Science** Pilani, India  
*Master of Science in Software Systems, Work Integrated Learning Programme; CGPA: 7.8/10 June. 2014 – May. 2016*
- **SSN College of Engineering** Chennai, India  
*Bachelor of Engineering in Electronics and Communication; CGPA: 8.3/10* *Aug. 2009 – July 2013*

## EXPERIENCE

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- **Keastone Software Labs** Bangalore, India  
*Senior Software Engineer* *Oct 2016 - Present*
  - **IRIIS Backend Architecture and Design:** Contributed to the overall backend architecture and design of the product IRIIS, a productivity and collaboration product of Keastone on the lines of Slack, Basecamp
  - **REST based Microservices development:** Designed and developed REST based Java microservice applications for utility services like Mail, Notes, Drive in IRIIS using Java frameworks like Spring boot, DropWizard, Spark Java. Also contributed to the development of utility services like task, search
  - **Third party product integrations:** Developed integrations for third-party products like Google drive, Evernote with IRIIS using OAuth
  - **Performance and Scalability of microservices:** Improved the performance of microservices by performing design, coding and query optimisations. Worked on the scalability aspects by performing effective memory tuning for the microservices
  - **Code review and Coding standards:** Framed the internal peer code-review process. Also internally adopted coding standard tools like FindBugs, PMD, CheckStyle
  - **Centralized Logging and Dev-ops:** Designed and developed centralized logging system using ELK stack (Elastic search, Logstash and Kibana) in development and production environments. Also maintained and upgraded jenkins for performance reasons in staging and production environments
  - **AWS Infrastructure monitoring:** Developed overall infrastructure monitoring using Beats framework of ELK stack. Also generated dashboards and visualizations for data analytics
  - **Investor portal development:** Contributed to the backend development of investor portal of Keastone. Also managed the translation of visual design requirements from CEO to development
- **Zoho** Chennai, India  
*Member Technical Staff* *June 2013 - Oct 2016*
  - **Mail Server Contributions:** Senior core member of Mail Server team. Developed and maintained the modules related to end to end delivery of emails. Also contributed to Kernel, Library and Storage modules of Zoho Mail
  - **Refactoring Mail Server codebase using Filter notification design pattern:** Contributed to the improvement of performance, readability and maintainability of mail server codebase by refactoring using Filter notification design pattern
  - **Priority delayed queue based implementation for Mail server tasks:** Performed the design overhaul for Mail forwarding, MxLookup and Email routing systems using Hbase priority delayed queue over cron based implementation. Hbase is chosen over cassandra after performance study due to scalability reasons
  - **Email authentication techniques development:** Designed and developed the following email authentication systems, DKIM Signer and Validation systems according to RFC 6376 and DMARC Validation system according to RFC 7489 to protect users against spam
  - **Netty framework for POP Protocol servers:** Improved the performance of POP protocol servers 4x by moving to Netty, an asynchronous event driven framework for pop request handling from Java NIO based implementation
  - **Caching framework optimisations:** Optimised caching framework with 10x storage performance benefits by employing Protocol buffers for serialising POJOs for storing in memcache considering their performance benefits over native Java serialisation. Also evaluated Redis for caching framework
  - **Stats framework and Zoho Reports integration:** Built a stats framework to obtain day to day statistics of various features of Zoho Mail. Integrated it with Zoho reports for visual presentation and report generation for analytics

## PROGRAMMING SKILLSET

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- **Languages:** : Expertise in Java with exposure to JavaScript, HTML, CSS, C, C++, Python, Lua, Shellsript, Jruby, Go, Matlab, NodeJs
- **Frameworks:** : JavaEE, DropWizard, Spring boot, Spark Java, Struts, Servlets, JUnit, Jmeter
- **Technologies:** : JVM, AWS, REST, ElasticSearch, ELK Stack, Nginx, Jenkins, API Gateway
- **Storage Systems:** : Mongoddb, Redis, Memcache, Postgres, MySql, Cassandra, HBase, Hadoop, Neo4j, DynamoDB, HDFS
- **Application Servers:** : Tomcat, Jetty, Apache

## ACADEMIC PROJECTS

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- **Enhancing SMTP Email deliverability with DKIM and DMARC ( PG Project ):** In order to enhance SMTP emails deliverability, email authentications techniques such as DKIM DMARC have been implemented in Zoho Mail
- **GMM Based voice classification ( UG Project ):** For an unrestricted domain speech synthesizer, Gaussian Markov Model based voice classification have been developed. This project was part of central government funded project titled Development of TTS System for all Indian Languages

## AWARDS AND EXTRA-CURRICULAR

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- **Sprint SuperStar:** Awarded with Sprint super-star title in Keastone for exceptional work during one of the sprints
- **Save the Hacker Hackathon:** Developed Caza - NLP based gift suggesting App with my teammates in Save the Hacker hackathon organized by FreshWorks and got placed as one among top five web-apps out of 400 web-app entries
- **Zoho Mail hackathon:** Developed Scheduled email feature in an internal hackathon organized within Zoho Mail secured first place out of 10 teams
- **Open source contributions:** Avid open source contributor and Stack Exchange community user
- **Merit Scholarship:** Secured merit scholarship during two years of UG college study
- **Hobbies:** Crossfit, Football, Guitar, Chess, Music