

KARTHIK LAKSHMI NARAYANA SARMA
1701 E 8th St, Apt 116, Tempe, AZ - 85281

(480) 434-7475

Portfolio: <http://karthiksarma.me>

karthiklsarma@gmail.com

Github: <https://github.com/karthiklsarma>

Linkedin: <https://www.linkedin.com/in/karthik-sarma-6713b416>

OBJECTIVE

Collaborate and build scalable, distributed, fault tolerant applications and enhance my skills through open source contribution.

EDUCATION

Arizona State University, Tempe, AZ, U.S.A.

Jan 2015 – Dec 2016

Master of Computer Science (MCS). Overall GPA 3.5

University of Kerala, Trivandrum, Kerala, India.

July 2009 - May 2013

Bachelor of Technology (B.Tech) in Computer Science and Engineering. Overall GPA of 3.5.

EXPERIENCE

Software Engineer – II – [Orion Health](#), Scottsdale, Arizona

Dec 2017 – Present

➤ Business Intelligence & Analytics

- Enhanced medical analytics platform developed using Apache Spark Streaming, Scala, Java 8 and elasticsearch.
- Real time streaming for healthcare analytics.
- Proficient in functional programming using scala.
- Programming in Apache Spark using Dataframes, RDD, and DStreams.
- Well acquainted with git source control system, jira issue tracker, Jenkins pipeline and amazon web services.

Software Engineer - I – [Orion Health](#), Scottsdale, Arizona

Jan 2017 – Dec 2017

➤ Business Intelligence & Analytics

- Contributed to a medical analytics platform developed using Apache Spark, Scala, Java 8 and elasticsearch
- Rest API development using Java 8, J2EE, JAX-RS, REST services
- Front end user interface development using React, ES6, Webpack, Redux, Javascript
- Work closely with team on features and peer review other developer code.

Application, Demo and Development Intern – [Alcatel](#), San Diego, California

May 2016 – Aug 2016

➤ Microservices and cloud platform

- Developed REST'ful services in Go lang for an application in the IoT domain.
- Managed distributed cluster and helped production release via Docker image.
- Proficient in application production and deployment using Apache Mesosphere, Apache Marathon and Docker machine.
- Developed skills in Linux virtualization using QEMU, KVM, libvirt.
- Used Amazon Web Services (AWS) / Elastic Cloud Compute (EC2).

Software Engineer (C++) – [Quest Global](#), Trivandrum, India

Oct 2013 – Nov 2014

➤ Toshiba Medical Systems Corporation (PIMS Application Development & Support)

- Contributed software engineering expertise in the development of PIMS (Patient Information Management System) through all phases of software lifecycle, from requirements definition through successful deployment.
- Provided user requirements analysis, design and programming support for enhancement of PIMS application.
- Assisted many senior developers in creating quick fixes to bugs for the software workflow process.
- Developed troubleshooting skills through log analysis and built hands-on experience in implementing design patterns.

PROGRAMMING SKILLS

- **Programming Languages** – Core Java, J2EE, Go lang, SQL, C, C++, HTML, CSS, React JS, Node JS, R, Scala
- **MVC Frameworks** - Spring MVC, JAX-RS, ExpressJS, Gorilla
- **Familiar IDE's** – IntelliJ, Eclipse, Sublime, Visual studio, PyCharm, Vi, Atom
- **Big-Data & Cloud Technologies** - Apache Spark, Apache Mesos, Apache Marathon, Docker, Hadoop MapReduce

PROJECTS

➤ SCALING COMPUTATIONAL GEOMETRY IN DISTRIBUTED PLATFORM - APACHE SPARK

Jan 2015 - May 2015

- Computational geometry simplified through distribution over cloud.
- Deployment in a cluster managed by 1 master and 3 slave nodes.
- Data Coordinate storage in Hadoop HDFS.
- Application developed in Java using spark libraries and spatial geometry operations implemented using JTS topological library.

- **MODELING DISCOURSE CENTRIC DATA (Java, JSP)** Jan 2015 – May 2015
 - A personalized support application to improve the learning experience of users by modeling data from learning
 - Forums. (Algorithm used - Topic Facet Modeling)
 - Automatically detects conceptual topics from short amounts of texts present on posts (taken from stack overflow dataset).
 - Uses D3 visualization to show analysis results & finds whether a post is valuable or not.
- **ANALYTICS DASHBOARD FOR TOPIC - POST SIMILARITY IDENTIFICATION (R, D3 Visualization)** Jan 2016 – Apr 2016
 - Analyzing the Cross Validated forum content consisting of 14000 posts.
 - Discovering the most frequently used topics and their relations.
 - Identified significant posts through plots drawn based on cosine similarity between post – topic content.
 - Web plot shows which user contributions are important.
- **WIKI GENERATOR (Express JS, Mongo DB, Node JS)** Jan 2016 – Apr 2016
 - An application for generating wiki out of chat messages.
 - Allows users to chat on numerous topics and show statistics for identifying quality information based on topics.
 - Users can tag when sending a chat message and like other valuable messages. The like count is used for generating statistics.
 - Wiki generation based on contents receiving likes greater than a threshold and wiki categorization based on tagging.
- **IDENTIFYING OPTIC DISORDER FROM RETINAL IMAGE (Python, Scikit)** Jan 2016 – Apr 2016
 - Analyzed data set of optical images and classification done to determine if a given image attribute is susceptible to disease.
 - Data set consists of attributes from optical image of patients.
 - Used different classification techniques such as random forest classifier and AdaBoost classifier.
 - Predicted disease from symptoms with 84% accuracy through data mining techniques.
- **10 YEAR US OPEN STATISTICS DASHBOARD (jQuery, Javascript, D3 Visualization)** Sep 2016– Dec 2016
 - 10 year US Open championship analysis using D3 visualization
 - Yearly graph plot shows all games sorted by year.
 - Shows Error Statistics of opponents for each player when clicked.
 - hover pie chart and histogram to know individual player statistics

ACQUAINTED OPEN-SOURCE PROJECTS

- Apache Mesos
- Docker
- Mozilla Ichnaea
- Apache marathon

COURSES

- Foundations of Algorithms
- Software Security
- Data Mining
- Data Visualization
- Distributed Database Systems
- Semantic Web Mining
- Technologies for online learning
- Distributed Software Development
- Software Analysis and Design
- Applied Cryptography