Krishna Ramesh

+1(352) 284-4631 | mekrishnaramesh@gmail.com | linkedin.com/in/mekrishnaramesh | github.com/mekrishnaramesh | mekrishnaramesh.github.io

OBJECTIVE

Passionate Software Engineer with several years of professional experience looking for roles as a Software Engineer.
Focus areas: **Full-stack development, Cloud Computing**

EDUCATION

- **Master of Science in Computer Science** **August 2016 - May 2018**
  University of Florida - Florida, US

- **Bachelor of Engineering in Computer Science** **August 2010 – May 2014**
  PES Institute of Technology, Bangalore, India

TECHNICAL SKILLS

Programming:	C, C++, Java, Python, Ruby, Bash, NodeJS
Web:	Spring, Ruby on Rails, AngularJS, HTML5, JavaScript, jQuery, Python Django, ExpressJS, REST Services
Datastores/Tools:	Oracle, MySQL, MongoDB, Elasticsearch, Solr, Cassandra, Docker, Chef, Git, JIRA
Cloud:	Hadoop, HDFS, MapReduce, Spark, YARN, Zookeeper, Pig, Oozie, HBase, Kafka, Storm, GraphX, AWS

PROFESSIONAL EXPERIENCE

Volkswagen - IT Intern, Enterprise Data Team, Greater Detroit Area, US **May 2017 – August 2017**

- Developed POC on how **Apache Kafka** can be used as a data ingestion platform for the Hadoop Infrastructure. Created data pipelines with Kafka as a coordinating source/sink for platforms with different data production/consumption rates
- Developed a sentiment analyzer program to process social media data and understand public opinion on various aspects of automobiles. Concepts: **NLP, Machine Learning** Implementation Language**: Python (NLTK, SKLearn libraries)**
- One of the trainers for introductory Python programming

Cerner Healthcare – Cloud Software Engineer, Bangalore, India **June 2014- July 2016**

- Came up with a better algorithm to automate and improve scheduling of a set of tasks with different completion times in a Hadoop cluster. **Eliminated manual efforts, decreasing completion time through several days**. Skills: **Shell Scripting**
- Developed **Chef cookbooks** to streamline node provisioning, **eliminating hours of manual efforts**. Developed POCs comparing this with a **Docker** approach
- Developed a **web application**, aggregating multi-node log data, providing an intuitive view of valuable metrics. Was **useful for troubleshooting errors**. Technologies used: **Elasticsearch/Logstash/Kibana stack**
- Deep dive into Hadoop framework examining Map/Reduce logs, troubleshooting issues in a multi-node environment. **Improved client satisfaction**
- **Pro-active** efforts to learn **time-saving productivity-increasing** technologies like Ruby and Chef, trained the whole team adding a valuable capability. Team lead selected me to **mentor incoming interns** on their projects. **STAR Award 2015**

Cerner Healthcare - Software Engineering Intern, Bangalore, India **January 2014 - June 2014**

- **Full Stack-developed**, a web application to monitor data processing in a cloud-based solution, providing valuable metrics
- An innovative way to connect to **Hadoop** ecosystem via **Apache Thrift** interface, enabling the development of the complete backend on one technology stack (Ruby Sinatra)
- **Reduced the number of service requests** raised due to unprocessed data. Technologies: **Ruby Sinatra MVC, MongoDB, JavaScript, jQuery, Bootstrap, Apache Thrift, Hadoop**

RELEVANT PROJECTS

Compiler for a Mini Language - Course: Principles of Programming Languages **Fall 2017**

- Developed an entire compiler for a **JVM based language** capable of processing 2D images

- Implemented: Lexical Analyzer, LL1 parser, Abstract Syntax Tree generator, Type Checker, Code generator
- Technologies used: **Java 8**, **ASM** framework for JVM bytecode generation

Aspect Oriented Sentiment Analyzer – Course: Cloud Computing and Big Data **Fall 2017**

- Reviewed several foundational papers on cloud computing: **GFS, MapReduce, Spark, Kafka, Storm, Heron, Tez, RDD**
- Developed a sentiment analyzer to analyze data and infer sentiment on various aspects of tech products, using machine learning and NLP techniques – Stemming, Parts of Speech and Named Entity Recognition, Naïve Bayes Classification
- Set-up a multi-node **Hadoop** cluster on **AWS** platform along with **Spark** and **Storm** to process several GBs of data
- Implemented the project on **Map/Reduce**, **Spark**, **GraphX** platforms and analyzed the performance

Smart Gunny Bag – Course: Distributed Operating Systems **Fall 2016**

- Project to create an IOT enabled device (**XINU** on **BeagleBoneBlack**) capable of sensing temperature and humidity
- Developed a networking application (over UDP), as a bridge between sensors' device driver programs and XINU's network interface, enabling the control of IOT device from cloud. Used **MQTT/Mosquito** to connect to the **cloud**.
- **Full-Stack developed** web dashboard application to control (viewing the status, turning on and off) various such devices. Framework: **Python Flask**, **AngularJS**

PyOpenMP

- A project implementing **OpenMP** parallel processing specification in **Python** to simplify parallel processing through use of directives within the regular(sequential) code in Python.
- Blocks of code could be targeted and processed in parallel. Interfaces for the directives were designed to be used intuitively with ability to specify the number of processes and threads
- Used: Python Decorators, Multi-Processing module

HealthKit – Hackathon 2015, Cerner India

- A prototype of an Android-iOS-PC-Linux cross-compatible health app to show vital health information was developed during a 48-hour long hackathon
- Strategies were involved to provide online-offline sync capability
- Used: **HTML5, jQuery, ElectronJS, PhoneGap, ExpressJS, NodeJS, MongoDB**

Tech Article Database - Course: Programming in Python **Spring 2013**

- A dictionary-based database was implemented in Python relying mostly on object serialization, to store tech articles from internet
- Developed a web spider to crawl/scrape articles from internet
- Developed a web application full-stack to provide a UI for viewing the articles.
- Technologies used: **Python, HTML/JavaScript/jQuery**

ACTIVITIES

Key Presenter @Devcon 2014, Cerner India

- The technical committee selected me based to present a talk at DevCon, Cerner's prestigious in-house engineering event showcasing innovative projects worked on in the company, based on my internship project
- Project presentation in the presence of **audience of 300+**. Rated **4+/5**

Member @Student Nokia Developer, PES Institute of Technology

- An active developer in the group working on mobile application development
- Applications developed: Scrabble game (Nokia phones), Restaurant finder (Windows phone)
- Technologies used: **Qt Creator for Nokia, Windows Phone SDK**