KARTIK ANIL REDDY

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EMPLOYMENT:

Heavywater Solutions Inc, *Software Engineer, Machine Learning*   Jan' 17 to present

Build a product to liberate human talent from drudgery by automating various tasks in the Mortgage/Insurance industry.

- Built a scalable platform entirely on AWS called AIVA (Artificial Intelligence Virtual Assistant) which can perform multiple skills. Worked on the skills for reading and comprehending documents which includes File Intake, OCR, Document Classfication and Entity Extraction/Classification orchestrated through multi-level workflows (SWF).
- Designed and built a continuous integration pipeline that enables flow and deployment of artifacts through the various stages and environments of AGILE Development (Development, Test, Exploratory and Production) using GitHub, S3, Cloudformation, API Gateway and Jenkins.
- Built an Intake/Output and Packaging Component that can perform zip/unzip operations and allows dual communication between S3 and a secure FTP server, via EC2 instances.
- Created an Elasticsearch domain with dynamically adjustable configurations to index over a million documents. Also built interactive webservices that allow interactions (Create Index, Delete Index, Index and Search documents) with this domain using API Gateway and Lambda functions.
- Used the Tesseract open source OCR engine to transform Images to XML and eventually JSON so that the data can be consumed and processed easily for other applications such as Entity Extraction and classification. The webservice was designed to run on ECS and save the
- Build REST applications using the apache and spring frameworks to train, extract and classify Addresses, Dates, Currencies, Names, Phone Numbers and other document information from an input JSON file that contains all words and their coordinates present in that document. Followed the microservices architecture by building independent webservices for each functionality using Lambda, EC2 and API Gateway.
- Configure UI to access and display documents to Operators based on their access levels (Using DynamoDB, SQS and S3). The operators can review and modify the classified data and submit the changes. This feedback is used for training the classification algorithms.

DataMetica Solution Pvt. Ltd, Pune, India, *Software Engineer (Intern)*   June'14 to Aug '14

- Effectively delivered assigned NLP module for POS tagging and topic modeling, for a call center client as part of a project team, implementing a speech to text conversion to facilitate reduced storage costs & data search ease.

PROJECTS:

DDI Analysis: Analyzing drug-drug interactions using Python and C++.   FL/ Sept' 16

- Obtaining a database of drug-interactions and drugs from Medline. Extracting mesh terms and calculating z-score and probability of interaction between drugs. Parallelizing the program using threads.

ZIKA ANALYSIS: Mining tweets about the Zika virus in Florida using Python.   FL/ July' 16

- Creatively collected Zika virus tweets restricted geologically for data mining, sentiment analysis and centrality leveraging on Natural Language Processing & Python twitter APIs.

EMOTION AND HAND GESTURE RECOGNITION (*Sponsored by Persistent Systems***)**   Pune⁄May'15

- Developed software to count number of fingers for gestures using Canny Edge Detection and used Principle Component Analysis and Support Vector Machine (OpenCV library) to classify emotions as one of 8 (angry, sad, disgust, etc.).

EDUCATION:

University Of South Florida   **Tampa, Florida, USA**
Master of Science in Computer Science   GPA: 3.88 / 4.0   Graduated Dec' 2016

Pune Institute of Computer Technology (PICT)   **Pune, India**
Bachelor's Degree in Computer Engineering   GPA: 3.1 / 4.0   Graduated May' 2015

Technical Skills: JAVA, AWS (Elasticsearch, EC2, ECS, API Gateway, S3, DynamoDb, SQS, Cloudformation, Lambda, SNS, Route53, SWF, Workspaces), C, Objective-C, C++, Python, PostgreSQL, MySQL, Angular2, Git, Android SDK, Linux, Jenkins, Maven, REST, Spring, Vaadin, LucidChart, Weka, Tesseract.

PERSONAL(Github link: https://github.com/Pajkouisn):

- **Scrum master** of an Agile development team at HeavyWater Solutions Inc   (Jan '17- present)