

Prithvi Sai Kavuri

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SUMMARY

Software Professional with loads of energy, and lots of love for innovations. I spend most of time thinking about crazy solutions and prototyping them is my favourite hobby. Good at machine learning, has decent knowledge in telcom, cloud and blockchain domains. Super fluent with python.

PROFESSIONAL EXPERIENCE

Jan 2019 – Present

Software Developer, **Platform services team, AltioStar Networks**, Bangalore, Karnataka.

Projects:

❖ **Observability Framework ::**

● **Description :**

- This project is automated pipeline for collecting, converting binary logs to readable logs,
- Filtering and converting to json
- Adding metadata , bringing up elk stack and pushing to elk stack.
- Providing users with dashboards ready for analytics

● **Technologies used ::**

- Elasticsearch , logstash , kibana, filebeat
- Python (for log conversion and streaming)

● **Responsibilities**

- Developed the whole module alone.
- coding , testing and maintenance.

❖ **Enodeb and DU simulators ::**

● **Description :**

- The project was used to test the working of CU_CP and CU_UP (control plane and user plane) of layer three of the 5g network.
- Written in python
- alone.

❖ **Config-manager ::**

● **Description :**

- The application that pushes configuration updates to respective applications.
- Each application would subscribe to some config-xpath and config manager. would inform changes to the subscribed applications.
- This entire application is written in python.

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- Config manager pushes configuration to applications using RPCs whose API naming is derived at run-time by the config manager to call handlers in target applications.
 - **Technologies used:**
 - Confd - CISCO TAILF.
 - NETCONF.
 - Yang (for data modeling).
 - Protobuf , gRPC.
 - Python (Language).
 - **Responsibilities :**
 - Developed it alone.
 - coding , testing and maintenance.
- ❖ **Yang to proto converter ::**
- **Description :**
 - A module to generate proto definitions of configuration structures that were given by 3GPP in yang representations.
 - This was an intermediate step to generate C structures for application programmers, rather than making them write the required structures manually every time when 3GPP comes up with a config data model.
 - Written entirely in python.
 - **Technologies used ::**
 - Pyang (to validate syntactical correctness of input yang)
 - Protobuf (to generate c structures by compiling generated protos)
 - Python (language used)
 - **Responsibilities**
 - Developed the whole module alone.
 - coding , testing and maintenance.
- ❖ **Grub tuning ::**
- **Description :**
 - This module updates grub command line parameters in deployment setups according to deployment scenarios and available hardware resources.
 - **Technologies involved :**
 - Redhat's tuned command lines.
 - Module fully written in python
 - **Responsibilities :**
 - Development, testing and maintenance.
- ❖ **Unit test framework for grub module ::**
- **Description :**
 - Test framework to simulate various deployments and hardware flavours.
 - **Responsibilities :**
 - Development and maintenance
- ❖ **Bug matcher ::**
- **Description :**
 - This project was intended to identify repetition of identified bugs.
 - Everytime a new anomaly is identified, logs are matched across Each bug reported in bugzilla.
 - Intention was to reduce human effort in going through large log files

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- **Technology used :**
 - Token based edit distance.
 - The idea for solving the problem has been derived from the approach that is used in **auto-correction**. (edit distance)
 - Since the log entry's statement format remains same no matter how many times it is written, hence this naive way of evaluating matches worked.
 - **responsibilities :**
 - Ideation and prototyping.
 - ❖ **Sleeping cell detection using machine learning::**
 - **Description :**
 - This project was an experiment to check if we can develop a model in-house to detect sleeping cells.
 - The comparison was against a third party vendor's algorithm.
 - Demonstrated the capabilities to the corresponding team, waiting for their call.
 - **Responsibilities :**
 - Cleaning data , training and demonstrating accuracy.
 - ❖ **Data visualisation tool for Jitter analysis ::**
 - **Description :**
 - Collecting timestamps from log entries for each TTI.
 - Plotting difference between consecutive entries.
 - ❖ **Lumberjack ::**
 - **Description :**
 - Tool to convert binary logs into text logs.
 - Takes in app binary, cpu frequency (of machine where app is run) and binary log and generates text log
 - **Responsibilities :**
 - Enhancements and maintenance.
 - ❖ **Anomaly detection in logs ::**
 - **Description :**
 - This project is intended to identify potential deviations from perfect run of applications by looking at logs..
 - The project is still in ideation. Not done yet.
 - **Technologies involved :**
 - Context based grammar using RNN. (word vector based language model)
 - Learning state machine that application follows based on logs (structured) so that deviations from the trained data are easily identified.
 - **Responsibilities :**
 - Identifying models and approaches to justify use case.
 - Prototyping and testing

Internships

SEP 2018 – NOV 2018

Data Platform Developer, Xactly Corp, Bangalore.

- Worked on automated data pre-processing
- Designed a solution to replace UI Faceted analytics platform with a natural language query based.

FEB 2018 – JUNE 2018

Blockchain Developer, Vardan Services LLP, Ghaziabad.

- Developed smart-contracts (ethereum erc20)
- Designed and Developed blockchain based credit-line platform. (for inventory management)
- Developed a mobile application for user portal

April 2017 – May 2017

Android developer, Void main technologies , Hyderabad.

- Developed a context based access control application.

SKILLS

Python	Machine Learning	LTE	Blockchain	SQL, NOSQL
C++, C, JAVA	GIT	NLP, AI, Image processing	Kubernetes, Docker	Confd , netconf
Data Science	Tableau, Weka	Shell scripting	Pyspark	GRPC

EDUCATION

2015-2019

BML Munjal University

Bachelor of Technology in **Computer Science**

GPA 9.0

PERSONAL PROJECTS

Virtual Data Analyst

- ❖ This project is a proof of concept for an **end-to-end automated data-science platform**.
- ❖ Given a dataset and a question, ideally the system should be able to identify all the analysis that is to be done.
- ❖ **Used Natural Language processing, automated pre-processing, feature engineering and auto ML techniques.**

Stock price forecasting based on news

- ❖ Analysing news related to the selected companies.

Drug discovery using LSTMs

- ❖ Tried demonstrate a way to reduce the capex of pharma industry , by reducing the time spent on random search, intended to find new molecules. project was intended to reduce the complexity by focusing search around existing molecules in a reduced latent space.

Chat Assistant Application

- ❖ Collects the topics liked/disliked by each person.Helps us in steering between topics accordingly.
- ❖ Warns **contradictions** . ie, warns us if we say something opposite to what we admitted in past. Specially if we are saying it to the same person