

2021-07-23 AI/ML for NFV Meeting Minutes

Attendees

Sridhar Rao

Rohit Singh Rathaur

Girish

Jahanvi Ojha

Kanak Raj

Akanksha

Ildiko Vancsa

Sl. No.	Topic	Presenter	Notes																												
0	Introduction of Volunteers		Jahanvi: IGDTU-Women . In 3rd Yr. Computer Science. Kanak: BIT Mesra. 3rd Yr Math/Computing. Akanksha: BIT Mesra. 3rd Yr Math/Computing.																												
1	Thoth as formal project in Anuket	Sridhar Rao	Action Item: Sridhar to send a formal mail to TSC, requesting for project approval. From next week, Thoth will be a formal project in Anuket. Participation in Lakelse release will be difficult. Targeting 'M' Release.																												
2	EUAG Update	Sridhar Rao	We presented at EUAG meeting on 20th July. Action Item: To Create a page in If-euag confluence page. Target Completion Date: 30th July 																												
3	Review of Model (FP) enhancement Ideas	Sridhar Rao	No progress yet. Girish: We should continue to enhance the model, and not necessarily wait for the data.																												
4	Data Status		<table><tr><th>Failure Type</th><th>Data Model Status</th><th>Availability</th><th>Creation Possibility</th></tr><tr><td>Node</td><td>IN PROGRESS</td><td>NO</td><td>Difficult</td></tr><tr><td>Links</td><td>IN PROGRESS</td><td>NO</td><td>OK</td></tr><tr><td>VM</td><td>YES</td><td>YES</td><td>Difficult (Experimental WIP)</td></tr><tr><td>Container</td><td>YES</td><td>NO</td><td>Difficult (Experimental WIP)</td></tr><tr><td>Application</td><td>IN PROGRESS</td><td>YES</td><td>Difficult</td></tr><tr><td>Middleware</td><td>IN PROGRESS</td><td>NO</td><td>Difficult</td></tr></table>	Failure Type	Data Model Status	Availability	Creation Possibility	Node	IN PROGRESS	NO	Difficult	Links	IN PROGRESS	NO	OK	VM	YES	YES	Difficult (Experimental WIP)	Container	YES	NO	Difficult (Experimental WIP)	Application	IN PROGRESS	YES	Difficult	Middleware	IN PROGRESS	NO	Difficult
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5	Volunteers - AlgoSelector	Work was described on 19th July. Links are also project. General Strategy Convert your questions to users in MCQ - Yes/No, multiple-choices, Scale. Web-Based application implementation Step-1: Separate graphs for each of the category. Start with MIT Graph .. and enhance it based on other references. <table><tr><th>Name</th><th>ML Category</th></tr><tr><td>Jahanvi</td><td>Supervised</td></tr><tr><td>Akanksha</td><td>Unsupervised</td></tr><tr><td>Kanak Raj</td><td>Reinforced</td></tr></table> Step-2: Integration of these three Step-3: Implementation platform/approach survey. Software architecture to use to implement (Ex: Python module 'abc' or dynamic forms, chat-bot). Step-4: Implement the graph Step-5: Testing/Review	Name	ML Category	Jahanvi	Supervised	Akanksha	Unsupervised	Kanak Raj	Reinforced							
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7	Volunteers - ML Problem	Relatively easier problems to obtain data. Important: Volunteer should be interested in 'Publications' Step1: Enhance the survey with "Gap Analysis" <table><tr><th>Name</th><th>ML Problem</th></tr><tr><td></td><td>Trend and Pattern Analysis</td></tr><tr><td></td><td>Anomaly Detection</td></tr><tr><td></td><td>Correlation Analysis</td></tr></table> Step2: Ideas to fill the gap. Step3: Enhance the existing implementation	Name	ML Problem		Trend and Pattern Analysis		Anomaly Detection		Correlation Analysis							
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8	TVLV-Tool for FailureGen - Project Update	Work is progressing well, Next week, Demo of Stage-1. Student: Shubhank Saxena															
9	Other Open problems (looking for contributors)	<table><tr><th>Project</th><th>Duration</th><th>Summary</th></tr><tr><td>Model based, Multi-Source Data Extraction</td><td>1 Month</td><td>Given a data model, the tool should extract the required data from multiple sources (Prometheus, Influxdb, Filesystem, etc).</td></tr><tr><td>Data Anonymizer</td><td>1 Month</td><td>This can be part of the previous tool, or can be developed independently. Given the format of the data-source, and columns to exclude, the tools should create a copy of the data without those columns.</td></tr><tr><td>Synthetic Data Generator</td><td>1 Month</td><td>Simulate infrastructure metrics. Emulate Collectd-Data.</td></tr><tr><td>Chaos-Tools and Data-Generation</td><td>1 Month</td><td>Given data-models, Identify which of the chaos tools can be reused to emulate the data. This applies only to Kubernetes.</td></tr></table>	Project	Duration	Summary	Model based, Multi-Source Data Extraction	1 Month	Given a data model, the tool should extract the required data from multiple sources (Prometheus, Influxdb, Filesystem, etc).	Data Anonymizer	1 Month	This can be part of the previous tool, or can be developed independently. Given the format of the data-source, and columns to exclude, the tools should create a copy of the data without those columns.	Synthetic Data Generator	1 Month	Simulate infrastructure metrics. Emulate Collectd-Data.	Chaos-Tools and Data-Generation	1 Month	Given data-models, Identify which of the chaos tools can be reused to emulate the data. This applies only to Kubernetes.
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10	Jumphost Re-Install Status	WIP. Target Date: 25th July.															