DATASIM

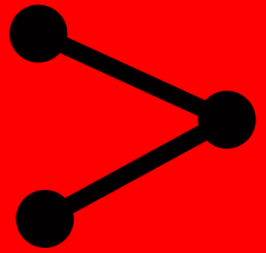
Total Learning Architecture

Shelly Blake-Plock • Alpha 2020

Yet Analytics

What are we trying to do?

Open Source Specs



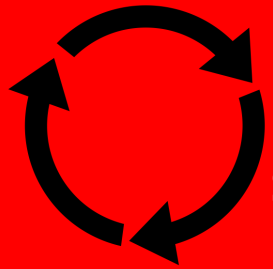
Simulated xAPI Data

Open Source App

Created by throwaway icons from Noun Project

What's the purpose?

Simulate and Generate xAPI



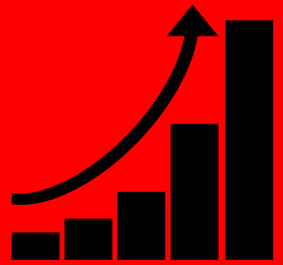
Benchmark and Stress Test TLA

Evaluate the Implementation

Created by Lloyd Humphreys from Noun Project

Why are we doing this?

Access to Testable
Big xAPI Data



Created by Catherine Veronica Drotar
from Noun Project

Will Inform DoD
Learning & Training
Modernization Policy

What is the problem?

A Missing Link for xAPI Adoption

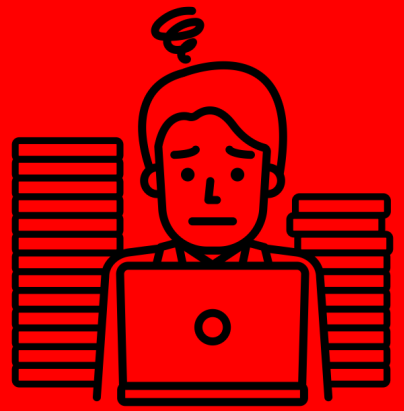
Created by creative outlet from Noun Project

Lack of Exemplar Testing and Evaluation Datasets

How is it done today?

Labor Intensive and High Cost

From Live Events



Created by Llisole from Noun Project

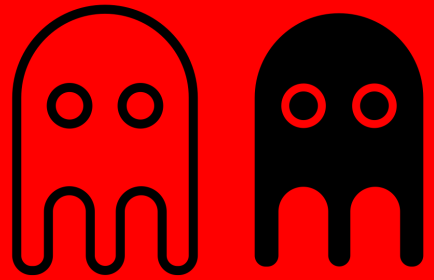
Or Created by Hand

Human Error and Lack of Scale

What is new in our approach?

Learner Personae

Digital Twins



Sim Modding

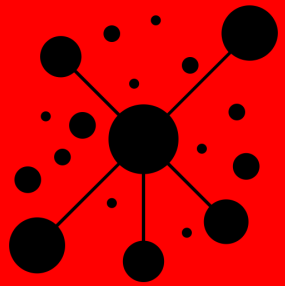
Created by Shastry from Noun Project

Non Player Characters (NPCs)

What's our solution?

DATASIM
Data and Training Analytics
Simulated Input Modeler

TLA
Testing



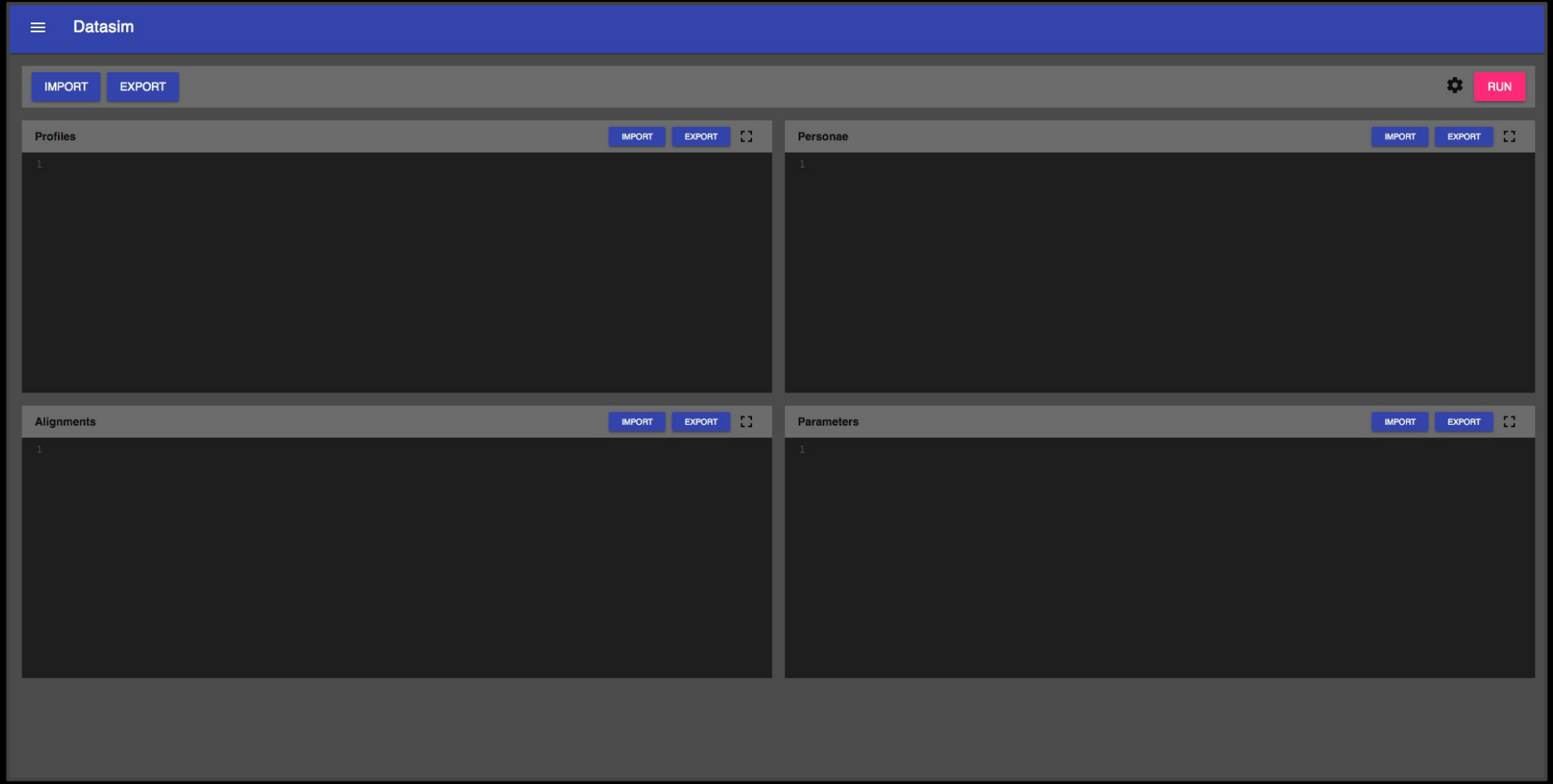
Big xAPI
Data

Created by Wenjie Jiang
from Noun Project

xAPI Profiles and
Analytics

How does it work?

State of DATASIM:
Alpha 2020


Datasim
IMPORT
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Profiles
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Personae
IMPORT
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Alignments
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Parameters
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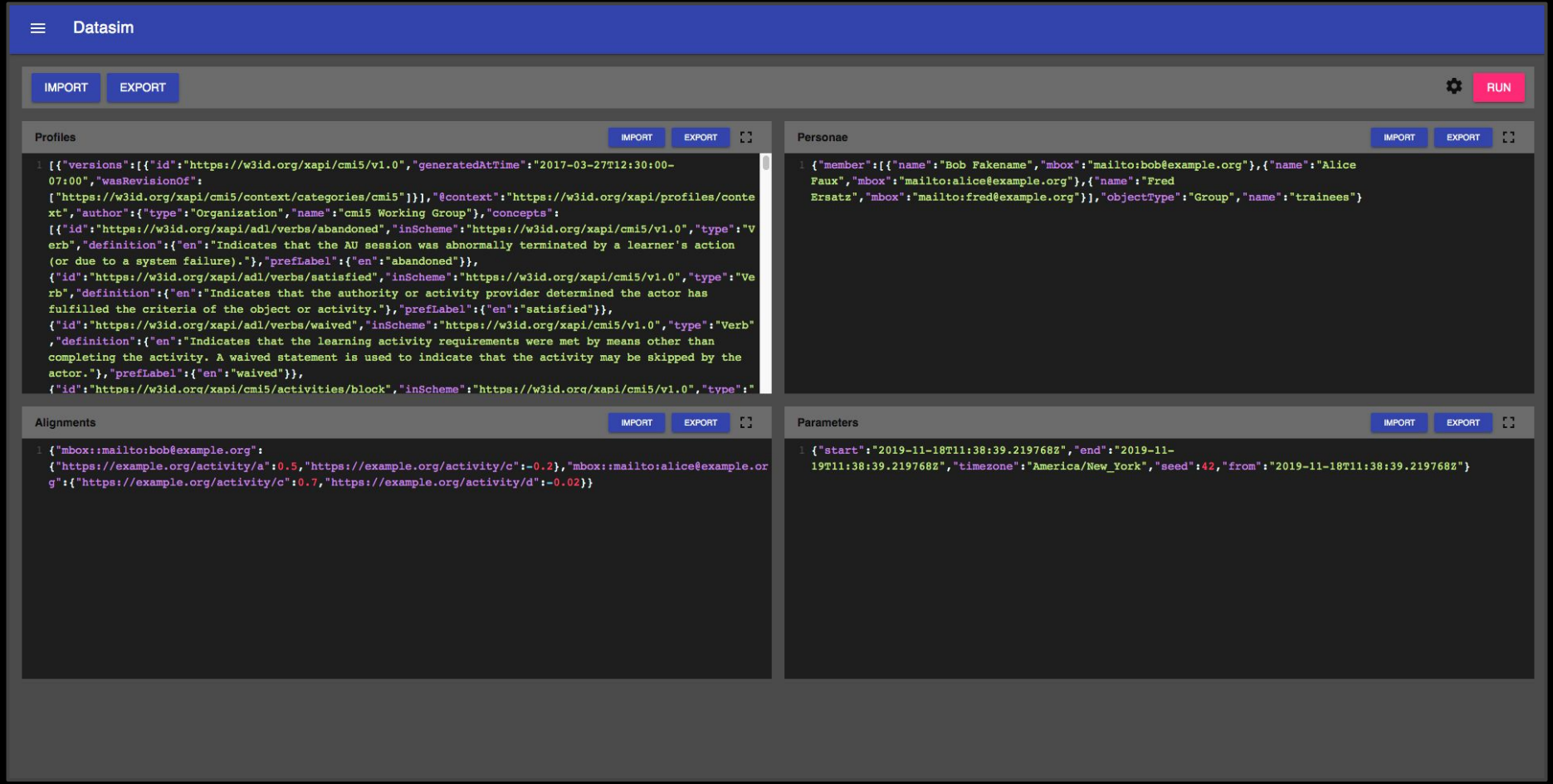
Datasim
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Personae
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EXPORT
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Alignments
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Datasim

IMPORT EXPORT RUN

Personae PROFILES ALIGNMENTS PARAMETERS IMPORT EXPORT


```
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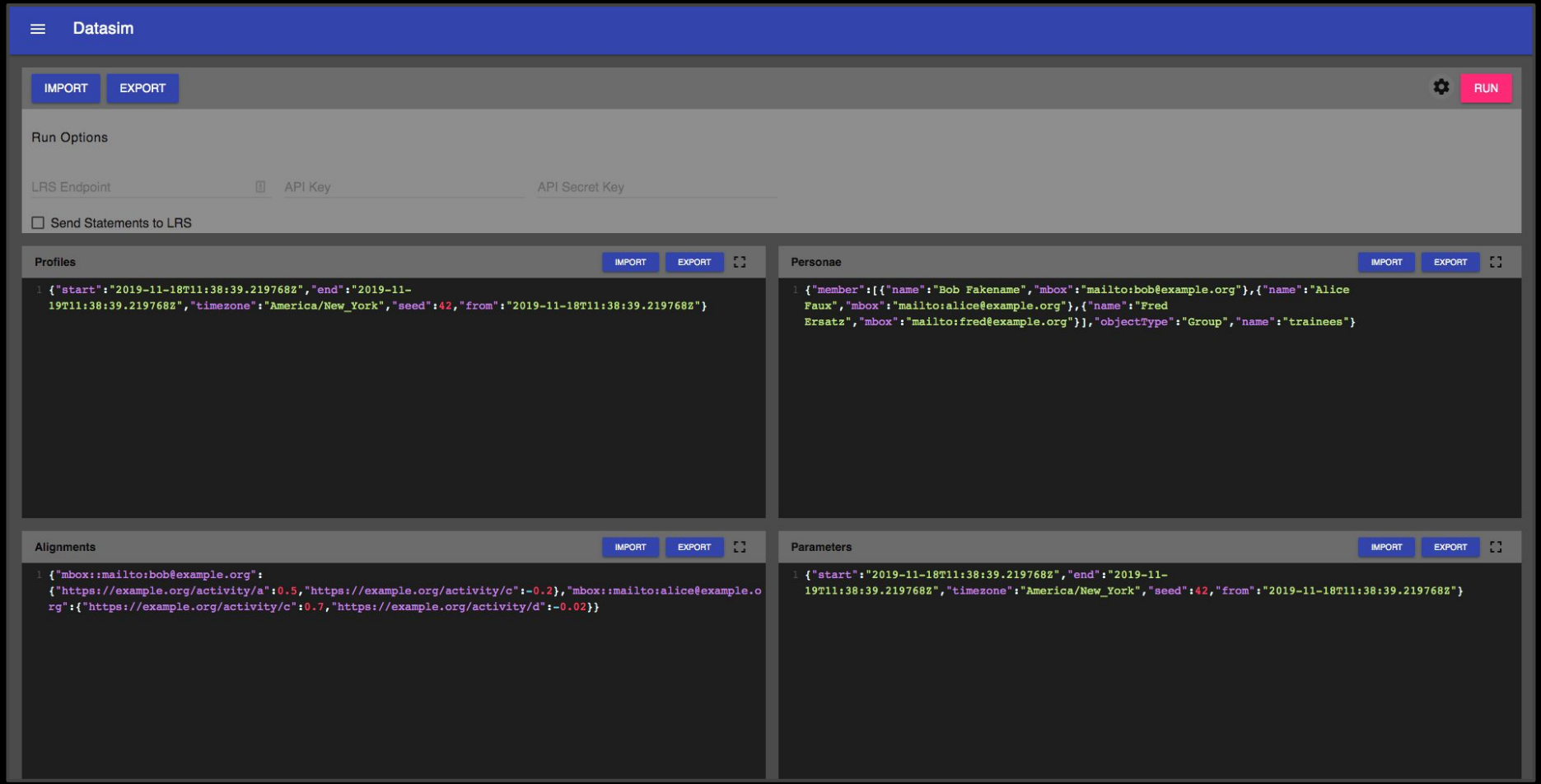
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Run Options
LRS Endpoint
API Key
API Secret Key
Send Statements to LRS
Profiles
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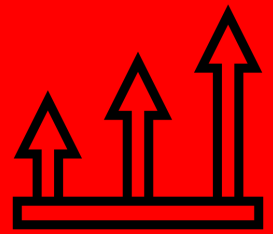
Technology

- Alpha can generate 500,000+ xAPI statements per minute on commodity hardware
- All statements are aligned to xAPI Profiles
- All statements will conform to the behavior model established by the analyst (the NPC model)
- Simulations can be team-based to test data design serving group activity
- Individual simulations can be run in duplication for testing purposes
- For access to the recorded ADL TLA Working Group webinar on DATASIM, see: https://www.yetanalytics.com/research

Who cares?

DoD Learning and Training IT Stakeholders

Increase Assurance



Created by projecthayat from Noun Project

Increase Innovation

Increase Speed and Agility

DATASIM mitigates against...

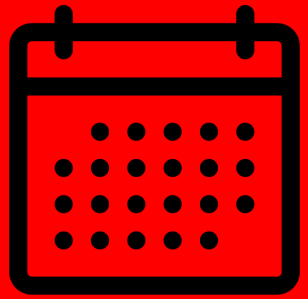
Created by Kimmi Studio
from Noun Project

- **Cost** — by allowing ad hoc and repeatable data sets
- **Time** needed to identify risks and problems in existing and developing software and applications across the TLA
- **Efficiency** risks of manual simulated data design, including the "meaninglessness" problems of automated simulated data

How long will it take?

Phases

Alpha
2020



Beta
2021

TRL 6
2022

Thank you.

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@blakeplock

DATASIM is funded in partnership with the Advanced Distributed Learning Initiative at DoD