



# Open Education Analytics

modern data estate for education

## Dispersed data prevents strategic use of data and AI



## For the Use Cases You Need



## Personalized Learning Pathways



## Real Time Data Dashboards



## Open Data for Research and Evaluation



## Identifying and supporting at risk students



## State, Province and National Longitudinal Reporting

# EDUCATION'S CHALLENGES WITH DATA AND AI



Datasets are dispersed and poorly governed



Concerns over data privacy and ethical use of AI



Low organizational expertise in learning analytics and AI



Getting started is overwhelming

# What is Open Education Analytics



OPEN EDUCATION  
ANALYTICS  
TECHNICAL  
RESOURCES AND  
COMMUNITY



ROLE AND TECH  
TRAINING:  
CAPACITY-BUILDING  
ON LEARNING  
ANALYTICS AND AI



PRINCIPLES OF  
RESPONSIBLE  
DATA AND AI  
APPLIED TO  
EDUCATION



SHARED  
LEARNING  
ANALYTICS AND  
AI USE CASES IN  
COMMUNITY



# OPEN EDUCATION ANALYTICS TECHNICAL RESOURCES AND COMMUNITY

Open resources on GitHub: Pre-made data pipelines, scripts, analytics notebooks, test data, dashboards, data models, and reference architecture

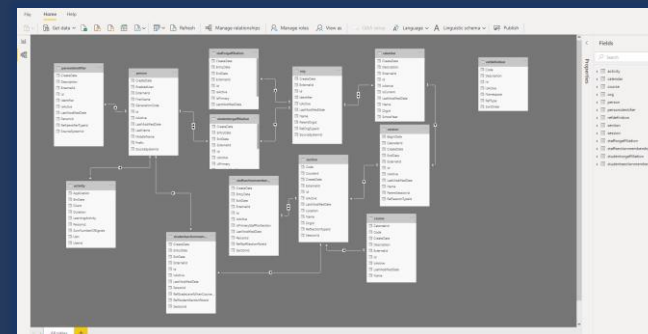
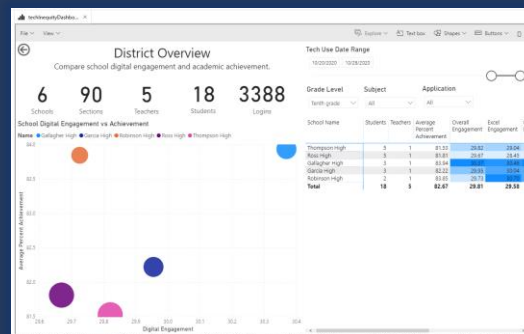
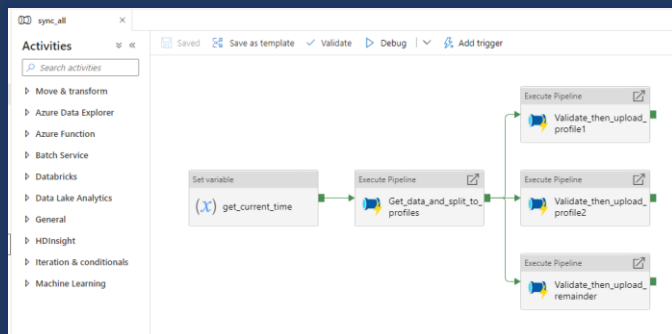
The screenshot shows the GitHub repository for `microsoft/OpenEduAnalytics`. The repository has 115 commits and 2 branches. The commit history is as follows:

Commit	Message	Time
genegc	Merge branch 'main' of <a href="https://github.com/microsoft/OpenEduAnalytics">https://github.com/microsoft/OpenEduAnalytics</a>	5 days ago
b009e63	add to readme	4 months ago
	Add files via upload	last month
	Update readme.md	10 days ago
	updated setup scripts.	last month
	Initial CODE_OF_CONDUCT.md commit	7 months ago
	Create CONTRIBUTING.md	last month
	Initial LICENSE commit	7 months ago

## Open Edu Analytics Implementation Guide

Published October, 2020

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1) Setup Data Share in School Data Sync	1
2) Setup Resources in Azure Portal	2
3) Setup Synapse	5
4) Setup Power BI	7







# OPEN EDUCATION ANALYTICS TECHNICAL RESOURCES AND COMMUNITY

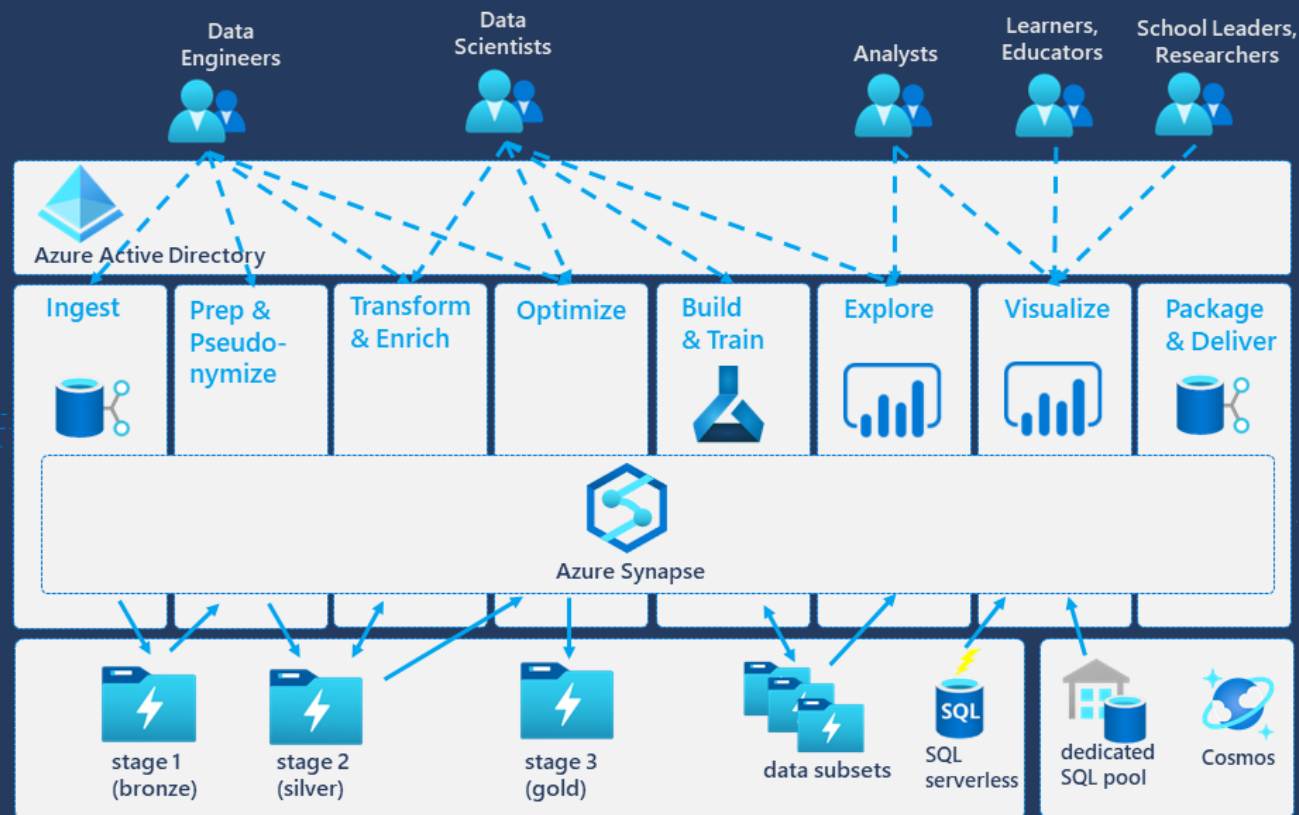
Open reference  
architecture for  
establishing the  
modern data estate  
using Azure cloud data  
and AI services



On-prem data

Cloud data

SaaS data



Personalized  
Learning  
Pathways



Realtime Data  
Dashboards



Open Data for  
Research and Eval



State, Province and  
National Reporting

Discover & Govern



Azure Purview



OPEN EDUCATION  
ANALYTICS  
TECHNICAL  
RESOURCES AND  
COMMUNITY

## Solving the problem with an open community

standards

- data standards (at rest, in transit)
- process standards (ethical use, dev cycle, testing)

best practices

- ethical use
- ref architecture, ref implementation
- dev process (dev cycle, testing strategy, releases)
- training

rapid iteration/  
emergent design

- sandbox env, test data sets
- evolve schema
- emphasis on build-learn-improve

modern tech

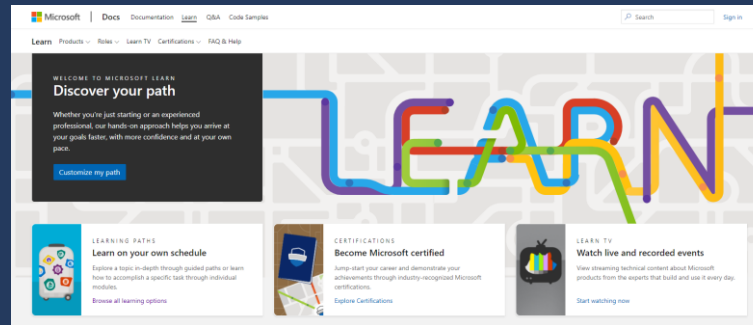
- cloud-based (low cost, infinitely scalable)
- easy setup (setup scripts, infrastructure as code)
- easy maintenance (auto-scale, monitoring)
- easy to extend (extensible arch, add-on modules)

ecosystem / global community

- customers, SI's, ISV's, standards bodies, policymakers
- focus on sharing, collaboration



## ROLE AND TECH TRAINING: CAPACITY-BUILDING ON LEARNING ANALYTICS AND AI



### LEARNING PATH

Get started with artificial intelligence on Azure

34 min

Azure AI Engineer Beginner



### LEARNING PATH

Create no-code predictive models with Azure Machine Learning

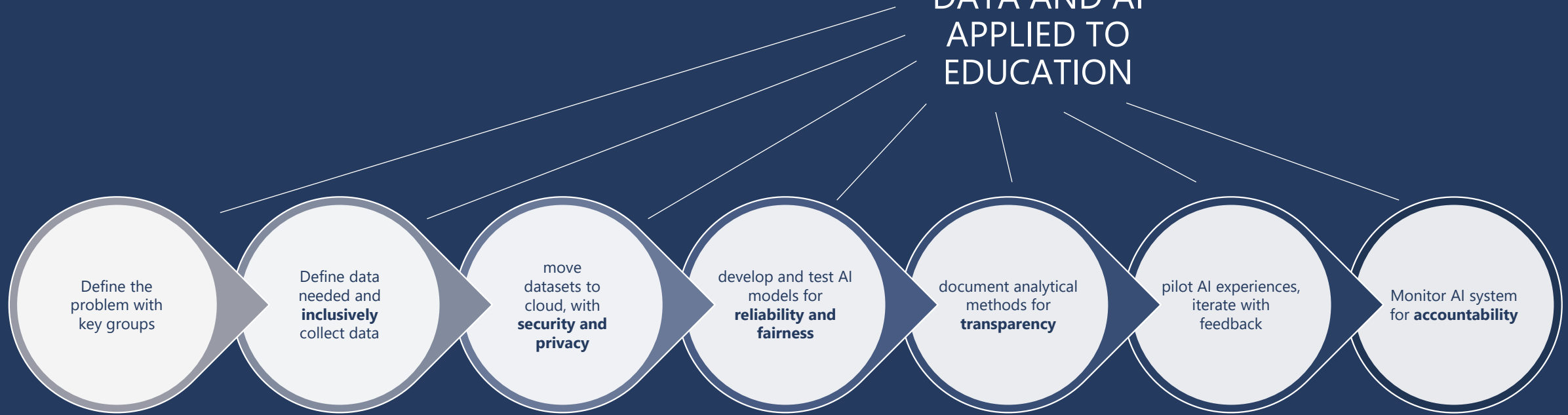
3 hr 29 min

Azure AI Engineer Beginner





## PRINCIPLES OF RESPONSIBLE DATA AND AI APPLIED TO EDUCATION



# Digital Attendance Dashboard

School Name

All

Date Range

1/1/2020

3/8/2021

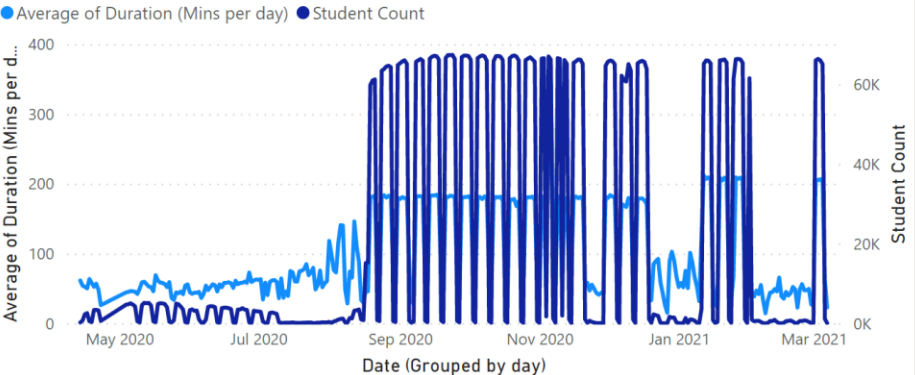
Attendance Activity

All

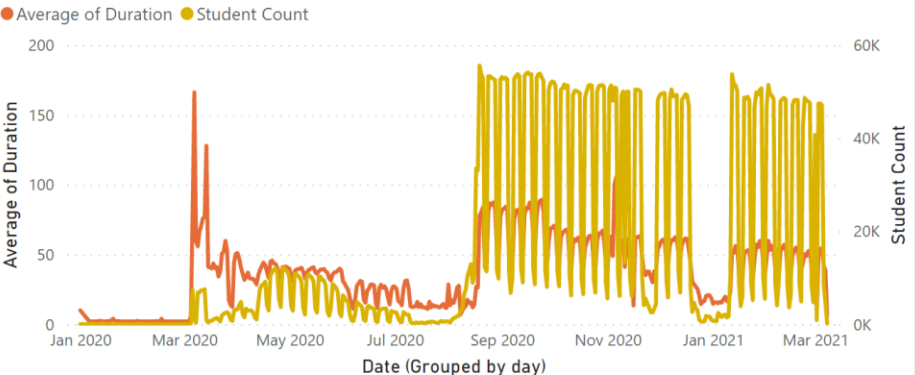
## 0365 Student Attendance by School and Date

Month and Year	January 2020		February 2020		March 2020
School Name	Average of Duration (Mins per day)	Student Count	Average of Duration (Mins per day)	Student Count	Average of Duration (Mins per day)
Addams Elementary					2
Addicott School					4
Adult Special Education					1
Ahwahnee Middle	2.00	22	2.00	1	8
Anthony Elementary	2.00	1			6
Ayer Elementary	2.00	25			5
Aynesworth Elementary	2.00	7			6
Baird Middle	2.00	1	2.00	6	6
Bakman Elementary					10
Balderas Elementary	2.00	7			11
Birney Elementary	2.00	9	2.00	3	8
Bullard High	2.02	87	2.00	42	4
Bullard Talent K-8	4.00	3	2.09	64	4
<b>Total</b>	<b>2.14</b>	<b>933</b>	<b>2.12</b>	<b>443</b>	<b>6</b>

## Synchronous Student Attendance (Teams Meetings)



## Asynchronous Student Attendance (Combined 0365 Apps except Teams Meetings)



SHARED  
LEARNING  
ANALYTICS AND AI  
USE CASES IN  
COMMUNITY

## Open Education Analytics Community

enabling many  
types of  
education data...



...to be used for  
many different  
scenarios

## Building A Global Analytics Ecosystem

Join Open Education Analytics at  
<https://github.com/microsoft/OpenEduAnalytics>.