



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

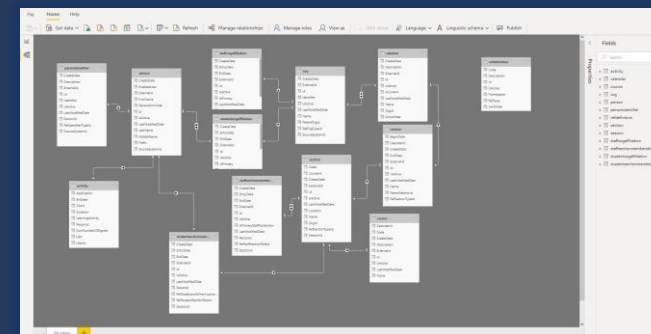
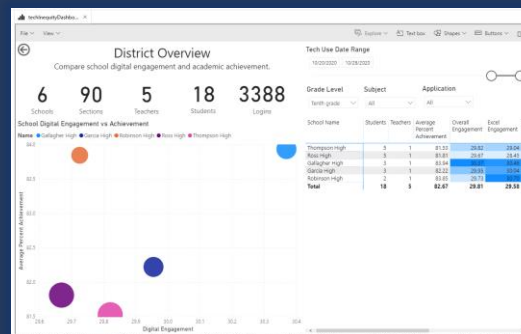
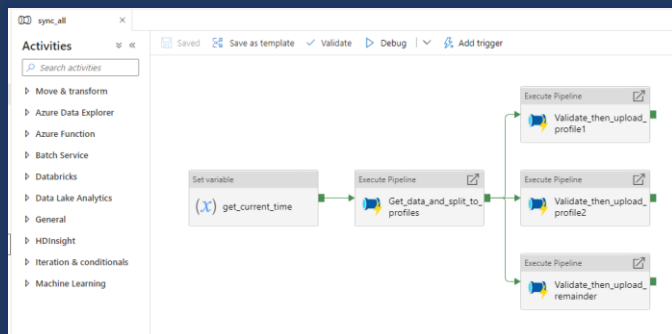
The screenshot shows the GitHub repository for `microsoft/OpenEduAnalytics`. The repository has 115 commits and 2 branches. The file list includes:

File	Description	Time
.vs	add to readme	4 months ago
docs	Add files via upload	last month
modules	Update readme.md	10 days ago
packages	updated setup scripts.	last month
CODE_OF_CONDUCT.md	Initial CODE_OF_CONDUCT.md commit	7 months ago
CONTRIBUTING.md	Create CONTRIBUTING.md	last month
LICENSE	Initial LICENSE commit	7 months ago

Open Edu Analytics Implementation Guide

Published October, 2020

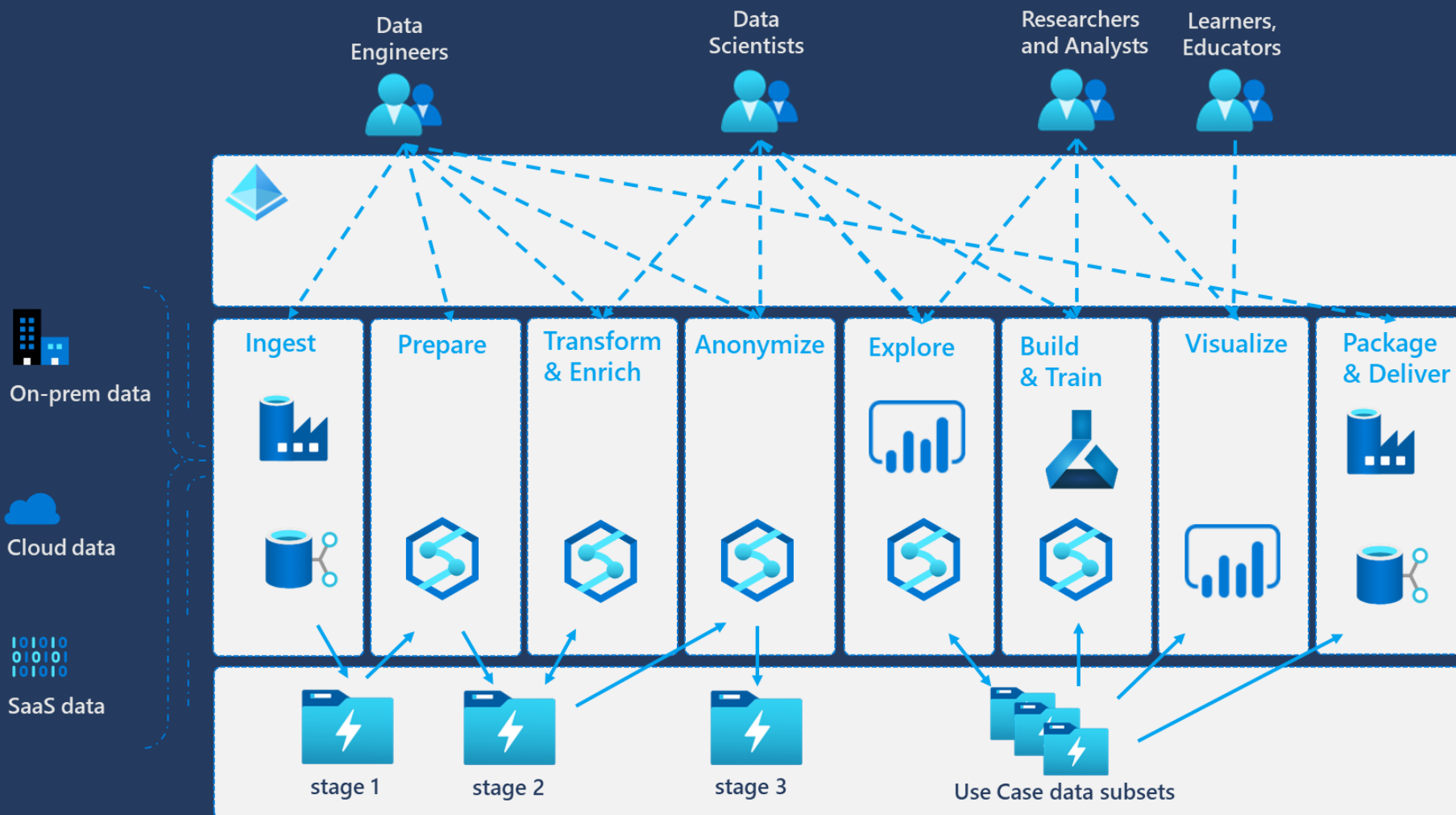
Introduction	1
1) Setup Data Share in School Data Sync	1
2) Setup Resources in Azure Portal	2
3) Setup Synapse	5
4) Setup Power BI	7





OPEN EDUCATION ANALYTICS TECHNICAL RESOURCES AND COMMUNITY

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





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

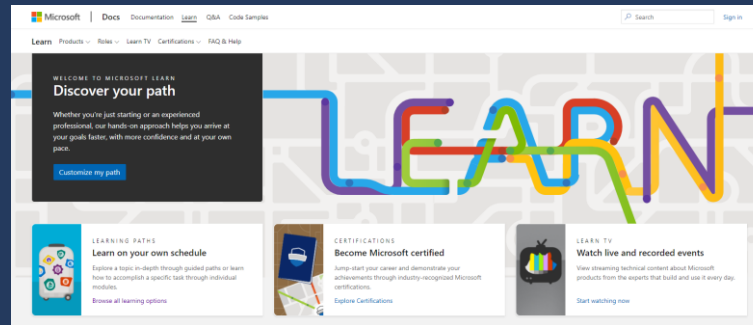
- cloud-based (low cost, infinitely scalable)
- easy setup (setup scripts, infrastructure as code)
- easy maintenance (auto-scale, monitoring)
- easy to extend (extensible arch, add-on modules)

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

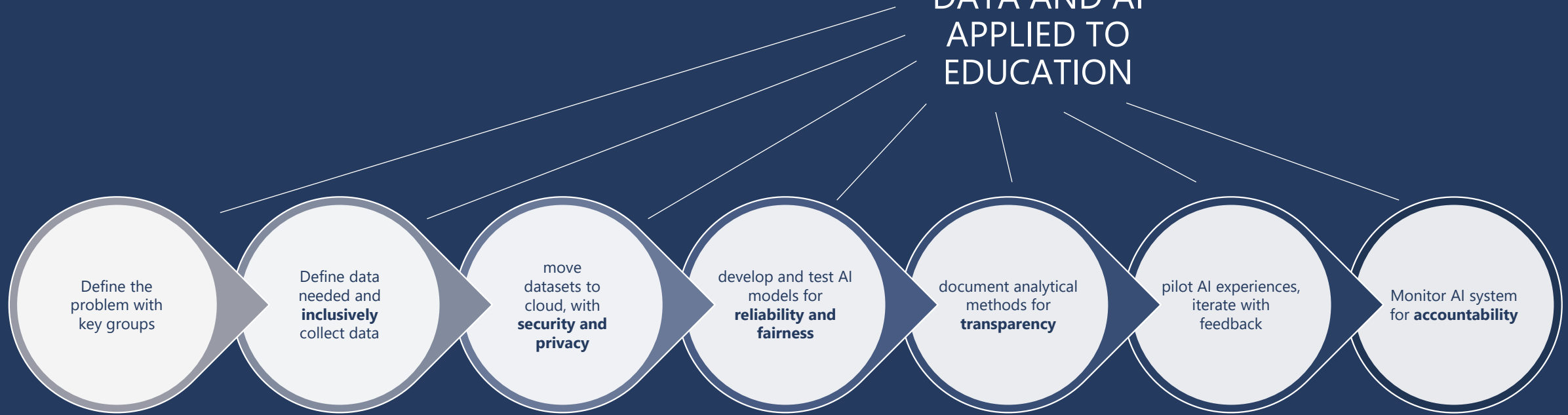
Create no-code predictive models with Azure Machine Learning

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

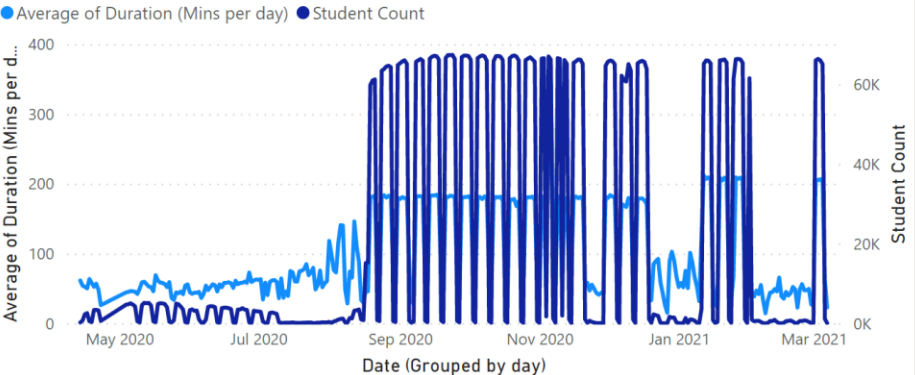
Attendance Activity

All

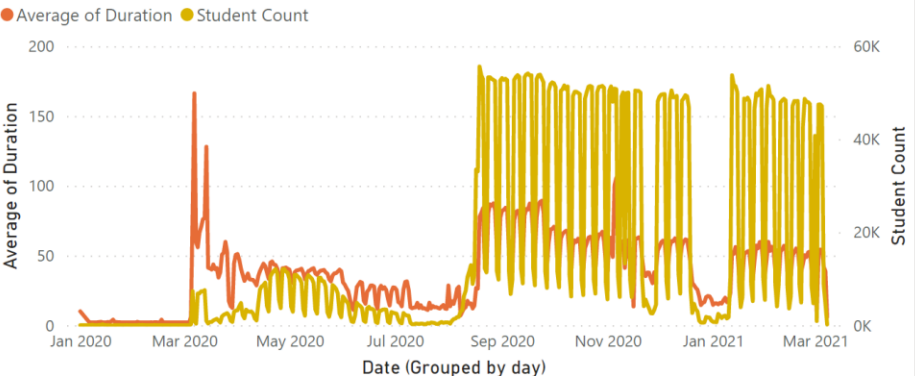
0365 Student Attendance by School and Date

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
Total	2.14	933	2.12	443	6

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>.