

## Google Cloud's learning platform

Reinventing the next-generation learning experience



Cedric Yang

Google Cloud EDU Team NOV, 2022

Google Cloud

## We're all becoming continuous learners

Traditional academic systems and processes struggle to scale



people have competencies misaligned with the work they perform<sup>1</sup>

81%

Business Leaders plan to rise employee certification in professional training to recycle corporate skills<sup>1</sup>



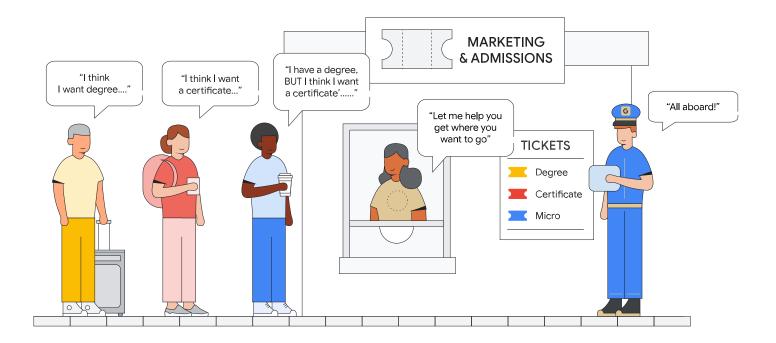
Faster growth in Micro-credentials than traditional programs<sup>2</sup>



<sup>1</sup> <u>BCG: Call for a New Era of Higher Education</u> <sup>2</sup><u>HolonIQ Smart Estimates, February 2021</u>

## The challenge to serve all type of learners

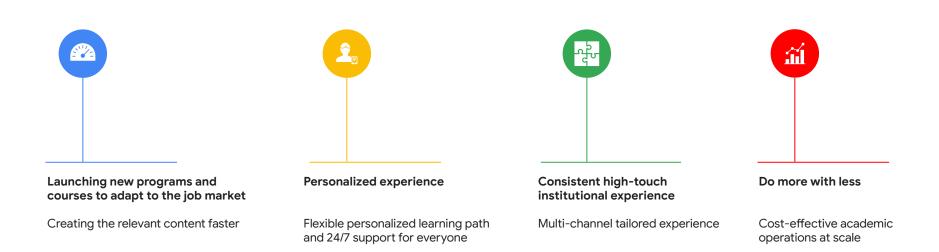
How to provide the best personalized experience at scale





## The challenge to serve all type of learners

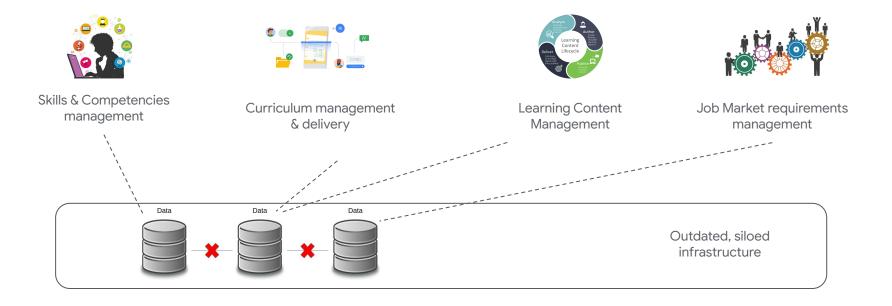
Faster content generation and personalized learning at scale





## Why we can't do it today

Operational inefficiencies and siloed environments that impede personalized experience at scale





## **Google Cloud for Learner Success**

## Intelligence built for EDU in four functional areas



Build agility and effectiveness at scale

- Personalized 24/7 support and advisory
- Marketing Optimization
- Academic Operations (e.g enrollment, virtual labs, etc)



Reinvent the experience for all type of learners

- Al-powered assisted learning at scale
- Automated generation and delivery of content
- Personalized flexible learning path



Understand and Predict trends and behaviors

- Student engagement
- Prediction of shifts in behaviors & preference
- Insights from learning management tools (LMS, SIS, collaboration tools, Kaltura, etc)

#### Alumni engagement and Career Services



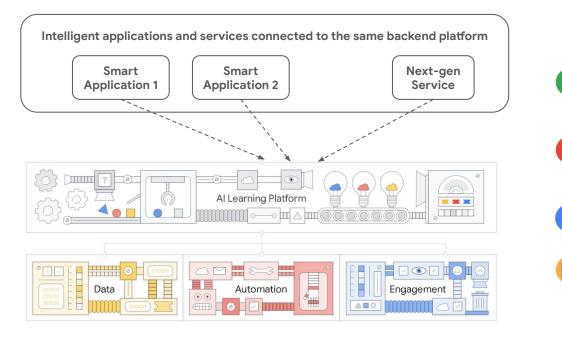
Modernize engagement at scale and earn lifelong learners

- Al-powered career services
- Strategic projects (e.g fund raising, lifelong learning subscriptions, dropout analysis, etc)



# A foundational platform for the future of education

Build next-generation applications and services much more effectively



TCO savings through automation of redundant processes and depreciation of unnecessary systems.

- Modernizing the creation and delivery of content to adapt to shifts in needs and preferences
  - Personalized experience for everyone, at scale and multi-channel

문 Mar

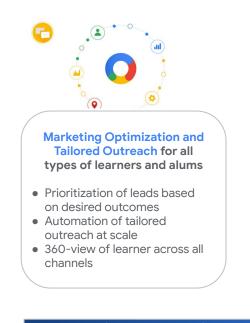
Connecting EDU pathways to the job market much more effectively



# Modernize Admission and Enrollment at scale

## Attract and enroll all types of learners

And set them for success with a personalized learning path, based on desired outcomes





Automate processes to get back to the applicant faster with a tailored response

- Automated digitalization and processing of applications
- Automated credit transfer/waiver assessment
- Automated Prior Learning Assessment (PLA).

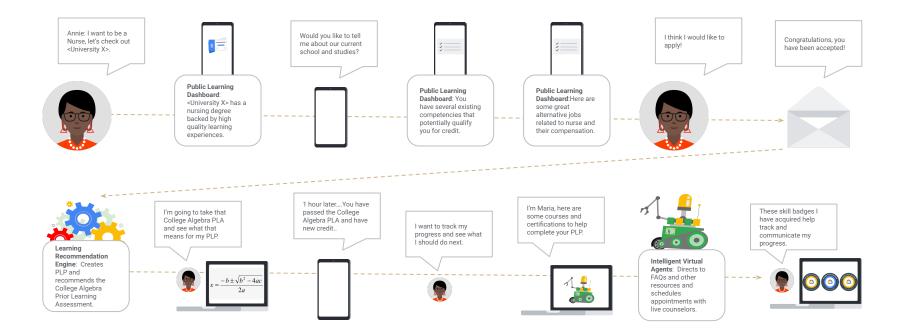


#### Prospect (new learner, alum)

Applicant

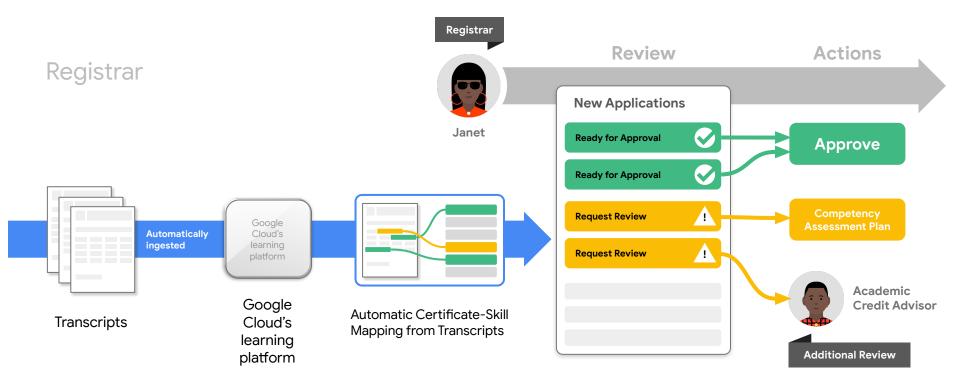


## Making as easy as possible for the learner to enroll Reduce friction. Enhance experience





## Helping registrars to scale 10x Intelligent and Personalized Admission

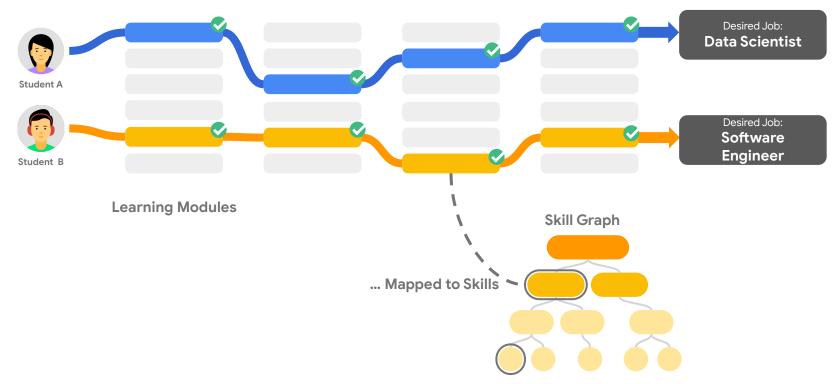




# Determine Personalized flexible learning paths based on desired outcomes at scale

## Moving to a Learner-Centric academic model

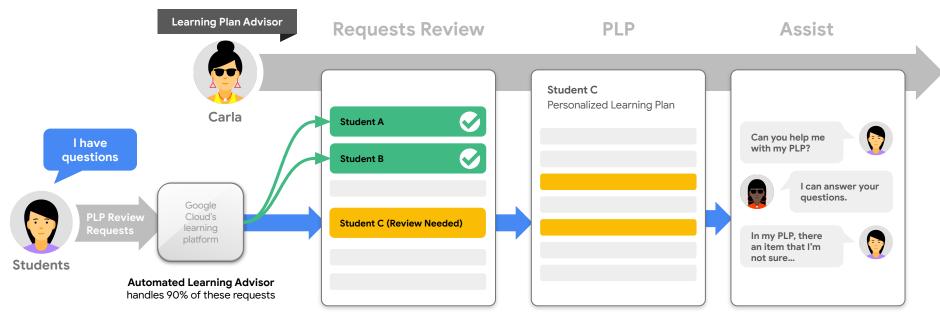
Personalized and Flexible Learning Path for all type of learners





## **Scale Student Advisory services**

### Provide a high-touch experience at scale



Student Success Dashboard



# Modernize the creation and delivery of instructor-designed content to more rapidly adapt to the job market.

## But we may have bottlenecks as we try to scale

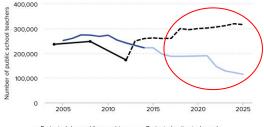
40 out of 50 states in US struggle with professors and instructors shortage

Economic Policy Institute About Areas of Research Publications Experts Reso

## The teacher shortage is real, large and growing, and worse than we thought

#### Teacher shortage as estimated by Sutcher, Darling-Hammond, and Carver-Thomas

Projected teacher supply and demand for new teachers, 2003–2004 through 2024–2025 school years



Projected demand for new hires — Projected estimated supply

Actual demand for new hires
Estimated supply

Source: Economic Policy Institute: The teacher shortage is real, large and growing, and worse than we thought



## Interactive Tutoring to help professors to scale

Automating taxing tasks to help professors focus on teaching

# 53%

Of the Teaching Task time is spend in creating and grading assignments <sup>1</sup>

# 2hr/day

Professors can invest more time with the student if we automate grading for them

Estimated Faculty Time Investment for Teaching Tasks

Teaching Tasks	Time Percentage per Week		Mean	Mean
	Mean	Standard Deviation	Hours: Week	Hours: Course
Grading papers and assignments	36.93%	18.42	14.77	3.69
Facilitating general discussion threads	14.73%	12.49	5.89	1.47
Grading discussion threads	8.74%	7.26	3.50	0.88
Initiating one-on-one contact with students	8.6%	6.86	3.44	0.86
Answering phone calls	7.78%	6.16	3.11	0.78
Answering emails	7.25%	5.46	2.90	0.73
Creating content-based resources for the classroom	3.59%	3.96	1.44	0.36
Course management and administration	3.35%	4.26	1.34	0.34
Collaborating with your teaching peers	3.28%	4.27	1.31	0.33
Creating how-to/instructional resources for the classroom	3.07%	4.03	1.23	0.31
Facilitating "questions for instructor" discussion thread	2.97%	4.13	1.19	0.30
Professional development related to your academic discipline	2.86%	4.91	1.14	0.29
Dealing with technical issues	2.19%	2.92	0.88	0.22
Professional development related to online teaching strategies	1.94%	3.07	0.78	0.20
Conducting research	1.08%	2.03	0.43	0.11
Other	1.06%	4.32	0.42	0.11
Committee work	1.05%	2.49	0.42	0.11



# New students prefer adaptive learning

Students expect great, flexible & personal experiences



want easier access to self-service solutions



expect to receive real-time assistance



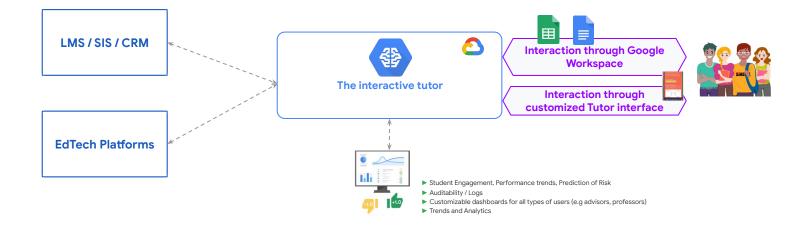
expect personalized support, understanding their preferences and needs, even if those interactions are not with humans

Note 1: American Express 2017 Millennial consumer report Note 2: Zendesk customer service report Note 3: State of the Connected customer report



## An interactive tutor for assisted learning

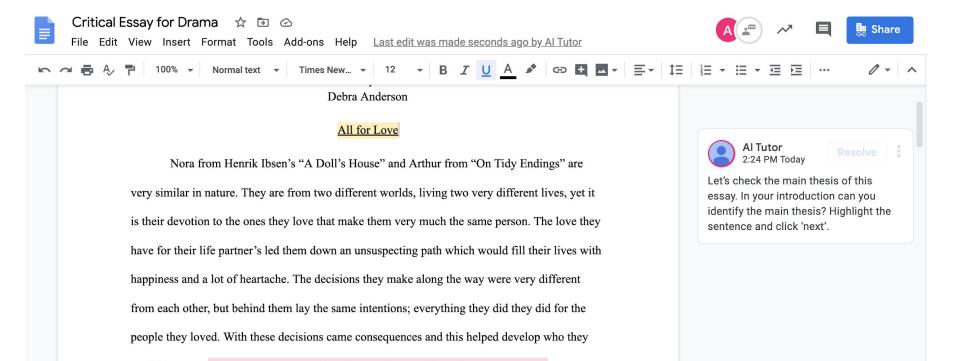
Better assisted learning at scale, get more value out of your T&L solutions



Accelerate the creation of content to scale existing courses or launch new programs (e.g online)

Provide real-time assisted learning support, 24/7 in more than +20 languages Integrate with Google Workspace or with your customized GUI interface to embrace adoption and collaboration Suggest content and additional courses to augment student learning and close potential educational gaps.





would become. Comparing these two characters we find conflict in their methods but

justification in their reasoning and the paths they decided to follow.

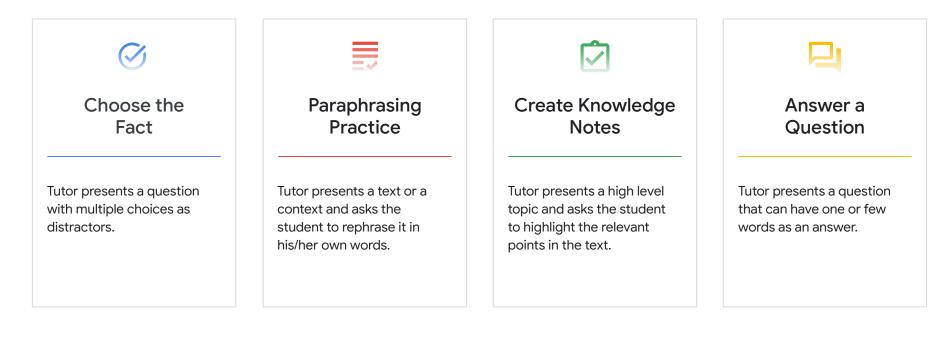
Nora is a character living in the late 1800's, in era when women were thought to be weak and incapable of survival without the guidance of man. She plays the part and adjusts her



Google confidential & proprietary

## **Google Cloud Platform interactive tutoring**

**Current Version Reading Functionality** 





## **Meet Walden University**

## Reinforcing learning through practice, at anytime, with your own content

Walden News // Aug 11, 2021

## Walden University Creates AI-powered Tutor Built with Google Cloud

Minneapolis—August 11, 2021—<u>Walden University</u> is spearheading a dynamic artificial intelligence (Al) tool that helps students reinforce their learning through practice. The Walden Al-powered tutor, named Julian<sup>TM</sup>, is built with Google Cloud's Al and machine learning (ML) capabilities, driving personalized experiences and knowledge mastery through various educational engagement activities.

"The Walden Al-powered tutor is part of our university's mission to drive student success through innovation in higher education," says **Steven Tom**, chief transformation officer at Walden. "The breakthrough cognitive tutor transforms learning and knowledge mastery through the power of Al, enabling a dynamic and engaging nature for instruction. As we continue to develop this tool, it will allow us to provide personalized instruction at scale to meet the needs and busy lives of adult learners."

Complementing how students learn in professor-led online courses, the Walden Al-

powered tutor was developed to help students master concepts – not just review them – through on-demand learning activities. This technology engages students in dialogue via chat functionality, offers learning activities, evaluates student responses, and provides feedback to students.

"While students gain knowledge in their programs, they can use Julian™, the Walden Al-powered tutor, to reinforce concepts and identify learning gaps," says **Karthik Venkatesh**, chief information officer at Walden. "Students will see a new set of activities generated by the Al-powered tutor every time they interact with the tool. It also creates educational notes for the student, which they can reference throughout the program and beyond."



# Optimize **student support at scale**, in any language, on 24/7, on any channel

## Uncover actionable insights from all your learners

Ensure the best academic experience for everyone, at scale

- Student engagement and prediction of academic performance and dropout risk at student level
- Real-time insights into opportunities for improvement for all programs:
  - What do courses with highest satisfaction have in common?
  - What do students with highest performance or engagement have in common?
- How are students' preferences shifting? What type of content should we offer next?
- How are all types of learners using your T&L tools and services?
- Forecast of demand per class or program
- Recommendation of next class per student's profile, background or discipline

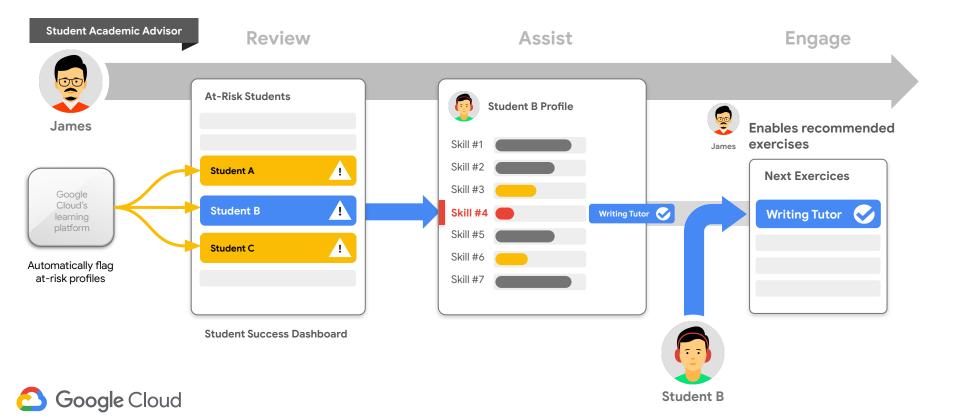


Self-service customizable dashboard for all business users (professors, advisors, support teams, students)



## Helping Student Academic Counseling to scale

Personalized proactive support for all learners



## What's next for Google Cloud's learning platform?

### •(•) Seeding the adaptors

## Google and partners are building adaptors

Unizin, Frost, LMS and Content Authoring / Playback

Open source

# **Open sourcing** the data model, APIs and base adaptors

V3.0d1 release in Q3

- (•) Build for use cases

LMS + video + content authoring

Curriculum and skills analytics

# **Customize** Google Cloud Learning Platform to **your own institution** in a staged approach

# Let's do this journey together

Help from our Professional Service team and Premier Partners is available



#### **Discover and Evaluate**

Joint discovery and assessment to determine the right Google Cloud Learning Platform initiatives for your institution.

#### **Design and Planning**

Design architecture and implementation plan to ensure a successful journey

#### Implementation

Develop, deploy, evaluate and engage in a sustainable innovation model



## Subscribe to Google Cloud's learning platform

A solution built for EDU in all aspects.

Flexibility to choose which functionality you want to include - the interactive tutor or more modules from Student Success Services. We can also collaborate to build a customized functionality for your institution, if interested.

\$

 $\infty$ 

We will determine a "flat annual fee", providing the "right to use" any of the service for a period of time, <u>no overage fees</u>. Google "puts skin in the game" by providing a fixed price for a specified functionality.

Can co-exist with your current engagements with Google Cloud. Every year, you can decide what services to subscribe to at your renewal



0

# Thank you

Google Cloud