

APAIE 2024



PERTH, AUSTRALIA 4-8 MARCH 2024

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Collaborating for sustainable impact: partnerships across the Asia Pacific

APAIE Perth 4 - 8 March 2024



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Session 5E: Tues 5th March, 16:15 – 17:00

**Harnessing AI to transform student access and efficiency
in admissions**

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Chair
James Holden
Duolingo, Australia/New Zealand

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Harnessing AI to transform student access and efficiency in admissions

Presenters: Julia Hoon and James Holden

Chair: James Holden

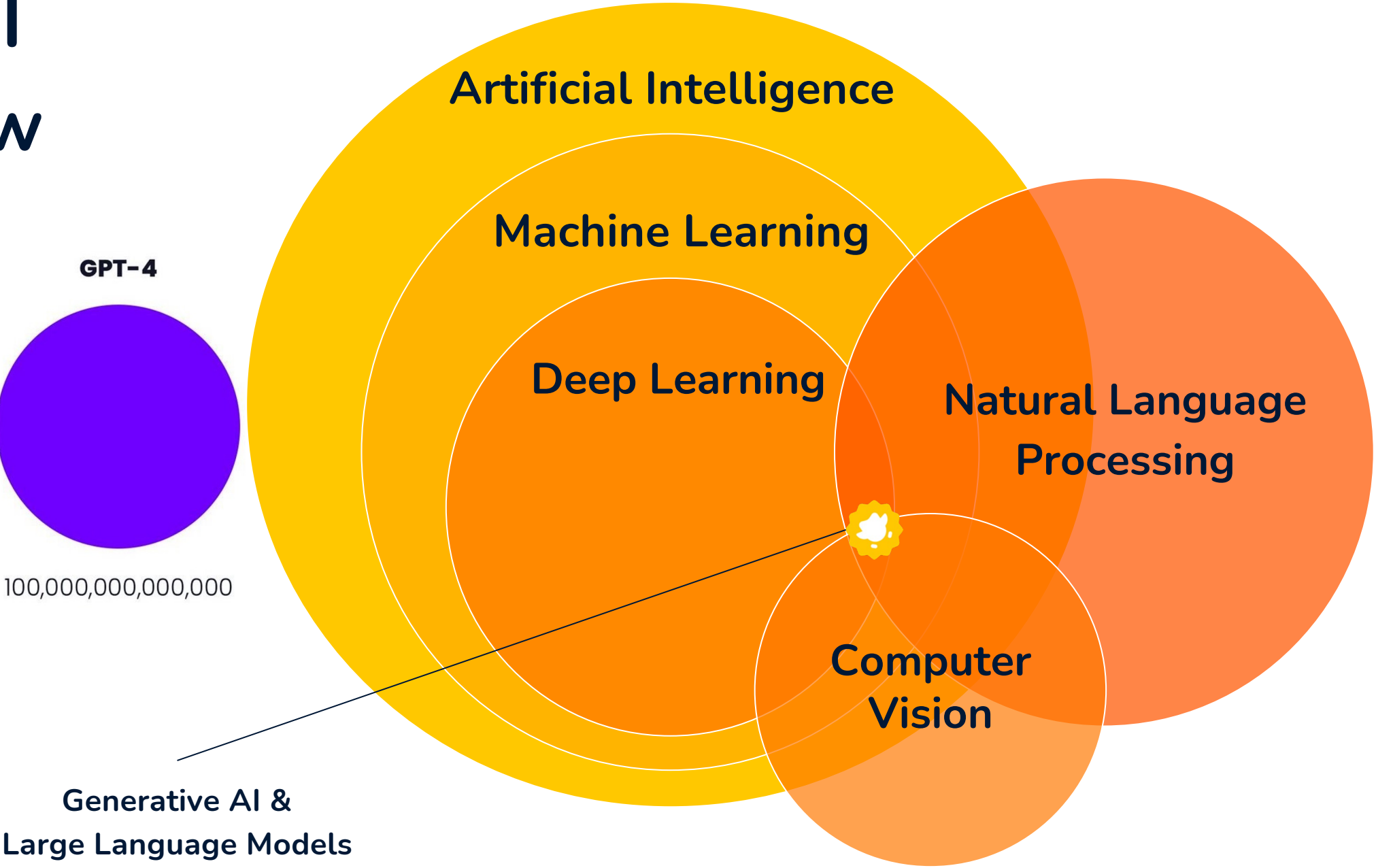
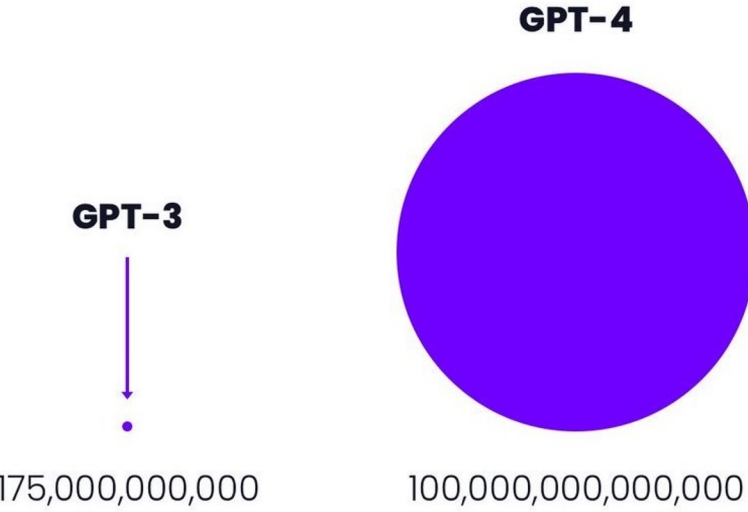
Agenda

1. Intro to AI
1. Implication for Education
1. AI in the Admissions Office



Chat GPT-4 > “University Admissions Office of the future”

Quick AI overview



Generative AI &
Large Language Models

Benefits of AI are increasingly accepted



- 385 BCG leading consultants were given a set of 18 key consulting tasks
- Participants with access to GPT-4:
 - Completed more tasks (>12.2%)
 - Completed tasks faster (>25%)
 - Produced higher quality work (>40%)

Who is most exposed?

- Before generative AI, technological advancement most threatened blue collar workers



- Generative AI raises concerns for white collar job displacement
- White collar workers must collaborate with AI
- 8 out of the 10 professions 'most exposed' to AI are in Education

(Princeton University '23)



Why is Duolingo excited about AI?

- **Duolingo's** mission is to develop the best education in the world and make it universally available.
- AI offers the best opportunity to **meet students 'where they are'** and overcome barriers of access
- AI is solving **'Blooms 2 Sigma Problem'**



AI Professor Luis von Ahn,
Duolingo's co-founder and
CEO



41 Languages



Literacy



Numeracy

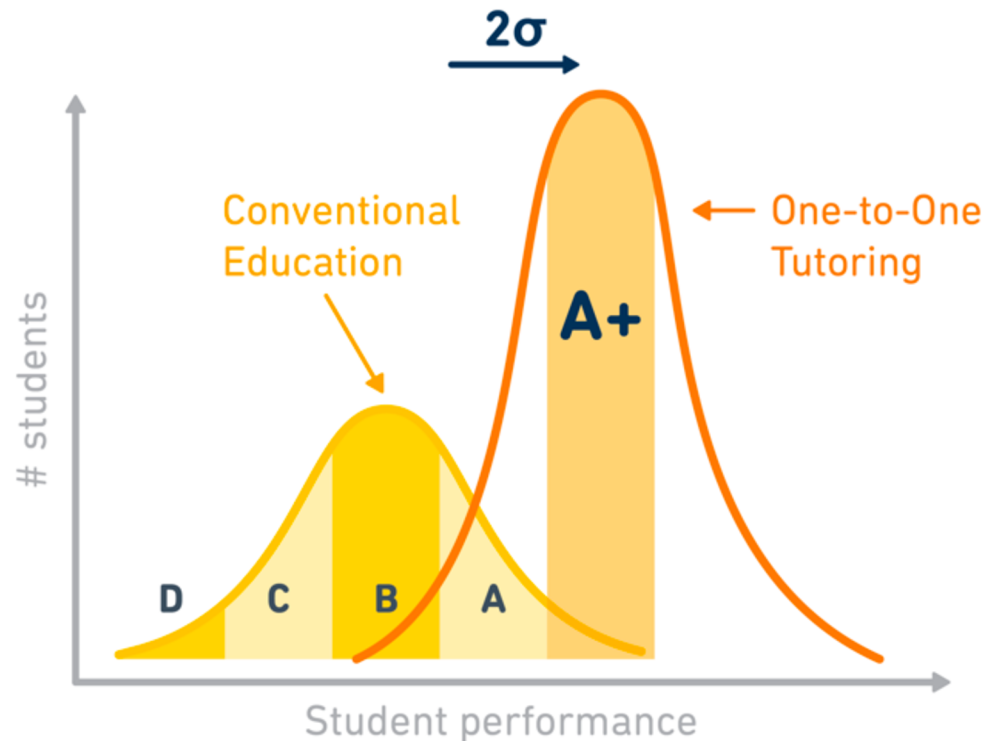


Music



duolingo english test

Blooms 2 Sigma Problem (1984)



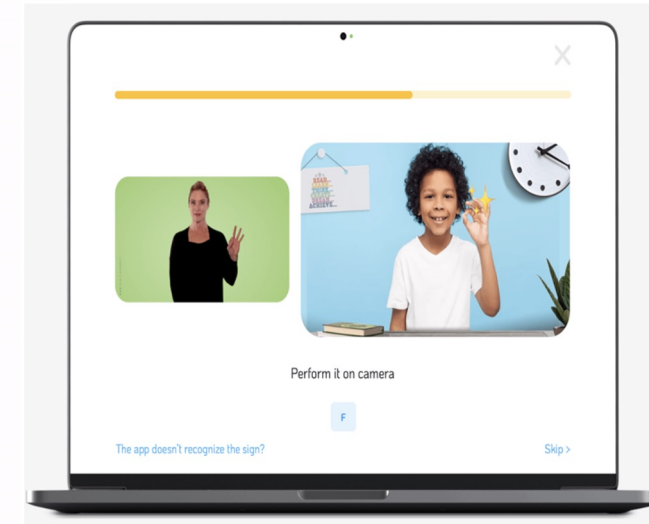
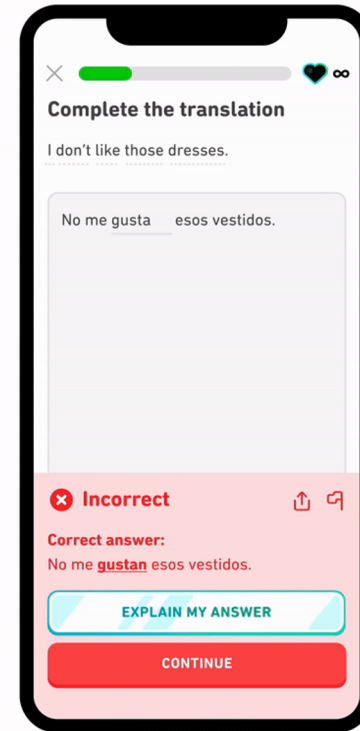
Bloom's 2-sigma problem

- **Results:** The average student achievement with a 1-1 tutor is better than 98% of students from a traditional class
- **Problem:** How can we deliver 1-1 tutoring against the limitations of time, resources, and the varying needs of students?

AI > Inclusive and Personalised

Learning/Assessment

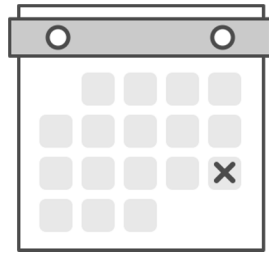
- Tailored to each student's unique needs, learning styles and education/career contexts
- Targeted interventions and personalised resources
- Immediate and intelligent feedback
- No longer constrained by the learners postcode or financial resources



 birdbrain

SLAIT 

AI > Increasing Access to High-Stakes Testing



Book a date
Pay >\$400
AUD



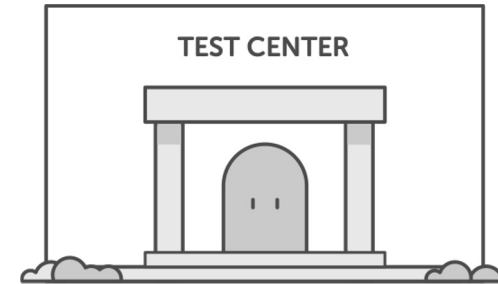
Generative AI item creation



Go to test-center or
even travel to a
different city



Asynchronous AI assisted security



+3 hours to take
a test



Computer Adaptive
Testing

AI in action - Plagiarism detection dashboard

- 1) AI Compares every response against external resources AND historical test responses.
- 2) Human Proctors verify and confirm AI analysis

The dashboard displays a comparison between a 'Current Response' and a 'Past exam' response. The 'Current Response' text is: 'Technology can be part of a healthy childhood as long as this privilege¹ is not abused . but too much scree time can be a bad thing². Children who consistently spend more than hours per day watching tv are more likely to be overweight. Kids who view violent acts on tv are more likely yo show aggressive³ behaviour teens who play violent video games⁴ and apps are more likely to be aggressive characters on tv and in video games often⁵ despict risky behaviour.' The 'Past exam' text is: 'In my point of view, children who consistently spend more than 4 hours per day watching TV are more likely to be overweight. Kids who view violent acts on TV are more likely to show aggressive³ behavior, and to fear that the world is scary and that something bad will happen to them. I have childrens in my family and I have experienced that as they watch movies on daily basis, their behavior and way of talking has changed a lot and it's kind of a bad influence in my views. Technology can be part of a healthy childhood, as long as this privilege¹ isn't abused. For example, preschoolers can get help learning the alphabet on public television, grade schoolers can play educational apps and games, and teens can do research on the internet. But too much screen time can be a bad thing² for example, children who view violent acts on TV, teens who play violent video games⁴, characters on TV and in video games often⁵ depict risky'. The dashboard shows a 'Max similarity: 60.00%' and 'Current similarity: 60.00%'. Similar sentences in both responses are highlighted in yellow. The dashboard also shows 'Similar Results' from 'Past exam' (60.00% similarity) and 'Internet' (49.09% similarity). At the bottom, there are two buttons: 'Not Plagiarism' and 'Plagiarism'. Annotations point to these elements: 'Text Overlap Statistics' points to the similarity percentages; 'Similar sentences are highlighted' points to the yellow highlights; 'Similar historical test sessions' points to the 'Past exam' result; 'Similar Internet content' points to the 'Internet' result; and 'Shortcuts for proctor decisions' points to the 'Not Plagiarism' and 'Plagiarism' buttons.

Text Overlap Statistics

Similar sentences are highlighted

Similar historical test sessions

Similar Internet content

Shortcuts for proctor decisions

Final Thoughts

1. AI is giving us unprecedented ability to educate our students against the limitations of time, resources and the varying learning needs.

1. Maximising AI is about leveraging the best of machines and the best of humans. **We always want a 'human-in-the-loop'**

Best of Machines	Best of Humans
<ul style="list-style-type: none">• Data Processing and Analysis	<ul style="list-style-type: none">• Creativity and Innovation
<ul style="list-style-type: none">• Consistency and Scalability	<ul style="list-style-type: none">• Emotional Intelligence
<ul style="list-style-type: none">• Predictive Capabilities	<ul style="list-style-type: none">• Adaptability and Intuition

3. Guardrails are essential and must be continuously updated as AI advances

AI in the Admissions Office



Practicalities

Benefits of AI tools in the Admissions Office



Predictive Analytics

Understanding our applicants
and where they come from.
Predicting acceptance rate.



Customer Experience

Chatbots and virtual agents.
Hyper-personalised AI generated
content.



Workflow Efficiencies

Application priorities & sort.
Eliminate repetitive tasks.
OCR capabilities.
Interview transcripts.



**AI is not used
for admission
decisions**

AI ethics for the Admissions Office



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