

Innovation and Strategies for Technology-driven Wellness and Mental Health Management

Kader Sakkaria

Chief Executive Officer, Uplift Array



Jack Brzezinski Ph.D.

AI Architect, Uplift Array



Challenges in Wellness and Mental Health Management

- It is expected that both universities and colleges will face a significant enrollment and persistence declines
- Research indicates that nearly 75% of all first-year students reported feelings of depression, anxiety and loneliness making it challenging to excel academically and socially.
- 95% of adults aged 18-25 hold a smart phone and utilize for multiple needs. There is an expectation for hyper-personalization for every experience.

Technology for Wellness and Mental Health

[Topoi \(Dordr\)](#). 2023; 42(3): 809–817.
Published online 2023 May 31. doi: [10.1007/s11245-023-09932-3](https://doi.org/10.1007/s11245-023-09932-3)

PMCID: PMC10230127
PMID: [37361723](https://pubmed.ncbi.nlm.nih.gov/37361723/)

Is AI the Future of Mental Healthcare?

[Francesca Minerva](#)¹ and [Alberto Giubini](#)²

▶ [Author information](#) ▶ [Article notes](#) ▶ [Copyright and License information](#) ▶ [Disclaimer](#)

Over the past decade, AI has been used to aid or even replace humans in many professional fields. There are now robots delivering groceries or working in assembling lines in factories, and there are AI assistants scheduling meetings or answering the phone line of customer services. Perhaps even more surprisingly, we have recently started admiring visual art produced by AI, and reading essays and poetry “written” by AI (Miller [2019](#)), that is, composed by imitating or assembling human compositions. Very recently, the development of ChatGPT has shown how AI could have applications in education (Kung et al. [2023](#)) the judicial system (Parikh et al. [2019](#)) and the entertainment industry.¹

AI and student wellbeing: New opportunities for assessment and learning

by Contributors
02 Mar 2023

SHARE



It is often noted that [AI will revolutionise our everyday life](#). Behind the scenes AI is currently shaping the information we access, supporting medical decisions, providing restaurant recommendations, and filtering email. These AI enabled activities occur in both our private and professional life. However, within education the integration of AI has substantially lagged behind other sectors. Only a few examples exist of practical AI adoption and even fewer that are evidence-based and scalable across diverse educational contexts (e.g., from K-12 to lifelong learning).

Free e-newsletter - get the latest news! 

LATEST NEWS

New figures reveal cost of properly funding Australia's public schools

The figures show equitable funding for the nation's public schools "is more than affordable",

A dignified retirement for teachers

Preparing for Payday Super will deliver benefits to schools and employees

The Victorian schools leading the way on sustainability education

The Educator looks at two award-winning schools empowering students to cultivate a



<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10230127/>

<https://www.theeducatoronline.com/k12/news/ai-and-student-wellbeing-new-opportunities-for-assessment-and-learning/282033>

Strategies for Empowering Students During the Journey

Confluence of domain knowledge and advanced technologies

- Build scalable infrastructure for platforms used by students
- Prepare for agility in AI-technology and content
- Use advanced AI and analytics for real time interactions
- Design for students to maximize engagement
 - Hyper-personalize content
 - Understand the audience
 - Implement meta-cognition – innovate in the area of learning
- Improve retention and graduation rates

Infrastructure Strategy: Scalability for Deep Learning and Analytics

© MAR 2023 | IRE Journals | Volume 6 Issue 9 | ISSN: 2456-8880

World Journal of Technology and Scientific Research

Volume 12, Issue 04 – 2023

Microsoft Azure vs. Amazon Cloud Services: A Comparative Analysis

SHIVENDRA BHONSLE¹, NEIL DESHPANDE², SUYASH MORE³, RUTURAJ PATIL⁴
^{1, 2, 3, 4} Department of Information Technology, Pune Institute of Computer Technology

Abstract—Cloud computing is the on-demand, pay-as-you-go distribution of computing resources like data storage, computing power, development tools and networking capabilities hosted at a remote data center which are distributed across multiple locations. These data centers are managed by various cloud service providers. It offers adaptable and expandable resources for quick access and development via mobile devices. Cloud computing is being used around the world by various organizations to boost their performance in the competitive environment. Cloud computing saw a great rise in recent technology trends across the globe. Choosing the best cloud service provider in the market can be a difficult process as each service provider has its own benefit and service quality. The tech giants like Amazon, Google and Microsoft are the leading cloud service providers with their own cloud network across the globe in the form of Amazon AWS, Google Cloud and Microsoft Azure. In this paper we would be comparing Amazon AWS and Microsoft Azure which could help in deciding which cloud service provider would provide optimum benefits according to the needs of the user. Indexed Terms— Cloud Computing, Azure, Aws, Cloud Service, Comparison, Benefits

machines to work as if they were all running on the same system.

Why Cloud Computing is so Important: Cloud computing has become an essential component in the development of a product or providing a service. It has elated the performance of teams and shortened the time of the deliverables to the end-user. There are quite a few reasons why cloud computing is such an important component of the development lifecycle of a product/service.

Few to mention-

- *Cost Savings:* All the infrastructure cost vanishes once switched to cloud computing.
- *Security:* A cloud host's full-time job is to carefully monitor security, which is significantly more efficient than a conventional in-house system, where an organization must split its resources among a plethora of IT challenges, security being only one of them.
- *Flexibility:* You don't have to worry about the storage issues and compute power if you can scale your solutions as per need which is quite possible due to cloud computing.
- *Mobility:* Cloud computing enables smartphone and device access to business data.

Improving the Scalability of Algebraic Multigrid through Cloud Computing

Chang Li, Bing Pan, Zheng Xiang, Lixuan Zhang, Lee Chen, Don Chen
Faculty of Computer Science and Information System, Universiti Teknologi MARA (UiTM), Malaysia

ABSTRACT

Algebraic multigrid (AMG) is a powerful technique for solving large-scale linear systems arising in various scientific and engineering applications. However, the scalability of AMG can be limited by several factors, such as the size and complexity of the system, the selection of AMG parameters, and the available computational resources. Cloud computing has emerged as a promising technology for addressing these challenges, by providing access to scalable and flexible computing resources. In this article, we explore the potential of cloud computing for improving the scalability of AMG-based solvers, by reviewing the existing literature, discussing the challenges and opportunities, and proposing a research methodology for future studies. Algebraic multigrid (AMG) is a powerful tool for solving large-scale linear systems arising from various scientific and engineering applications. However, the scalability of AMG can be limited when dealing with very large systems, requiring sophisticated algorithms and computing resources. Cloud computing offers a promising solution to this issue, providing scalable, on-demand, and cost-effective access to computing resources. In this paper, we investigate the potential of cloud computing to enhance the scalability and performance of AMG. We propose a hybrid cloud approach that combines the advantages of both private and public clouds, and present a comprehensive evaluation of this approach on a set of large-scale benchmark problems. Our results show that our hybrid cloud approach can significantly improve the scalability and performance of AMG, making it an effective tool for solving large-scale problems in a cost-effective manner.

KEYWORDS: Algebraic Multigrid, Cloud Computing, High Performance Computing, Computer Science, Information System

AI Strategy: Generative Algorithms

- External opportunities

- Conversational systems and multimodal interaction
- Emerging frameworks for combining new AI resources

- Internal opportunities

- Invest in culture of innovation
- Adjust strategies related to learning and student success
- Prepare capabilities to answer difficult questions:
 - “Am I learning the right material?”
 - “Is my curriculum up-to-date?”
 - “What can I do to feel better during my academic journey?”

Generative artificial intelligence empowers educational reform: current status, issues, and prospects

 Hao Yu^{1*} and  Yunyun Guo²

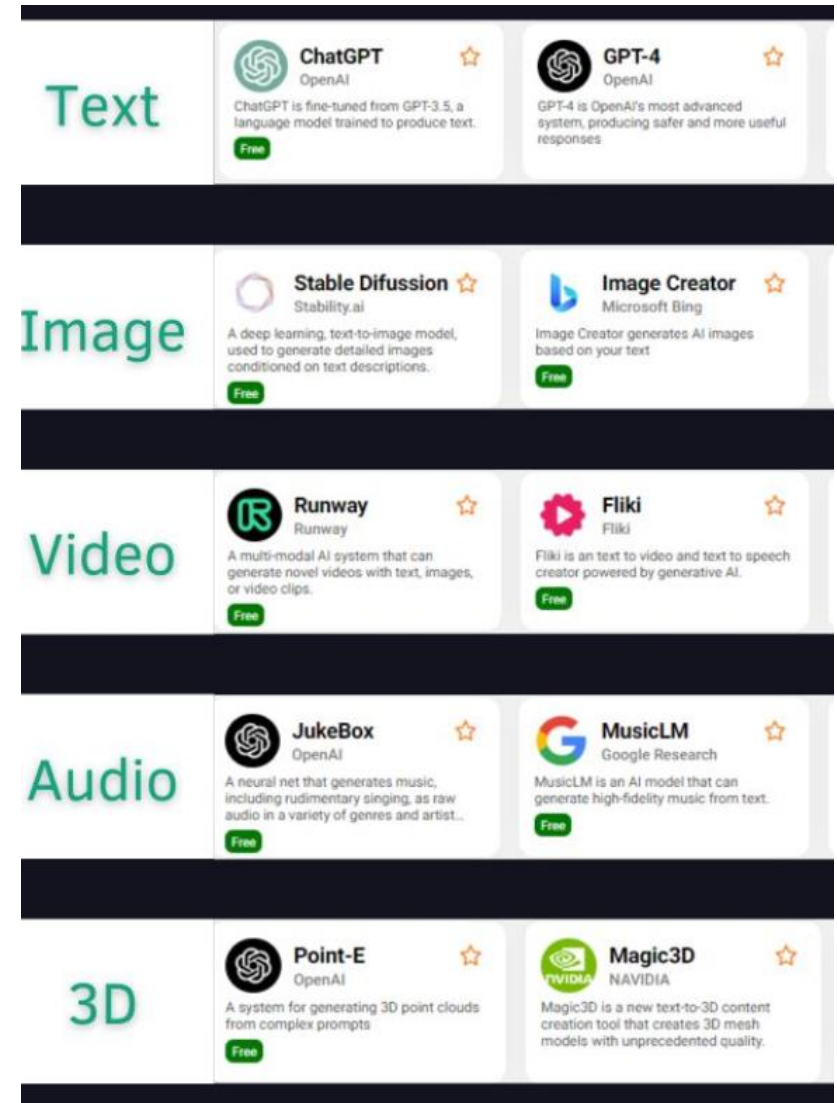
¹ Faculty of Education, Shaanxi Normal University (SNNU), Xi'an, Shaanxi, China

² School of Foreign Languages, Northwest University (NWU), Xi'an, Shaanxi, China

The emergence of Chat GPT has once again sparked a wave of information revolution in generative artificial intelligence. This article provides a detailed overview of the development and technical support of generative artificial intelligence. It conducts an in-depth analysis of the current application of generative artificial intelligence in the field of education, and identifies problems in four aspects: opacity and unexplainability, data privacy and security, personalization and fairness, and effectiveness and reliability. Corresponding solutions are proposed, such as developing explainable and fair algorithms, upgrading encryption technology, and formulating relevant laws and regulations to protect data, as well as improving the quality and quantity of datasets. The article also looks ahead to the future development trends of generative artificial intelligence in education from four perspectives: personalized education, intelligent teaching, collaborative education, and virtual teaching. The aim of the study is to provide important reference value for research

Multimodal Transformative AI Strategy

- AI “persona” platforms
- Multimodal interactive systems
- Identifying “aha” insights
- Knowledge curation, content moderation for LLMs: private vs. public models



Source: Generative AI, LinkedIn

Data storytelling and behavioral analytics

- Tasks that depend on personalities, knowledge, and optimization are great candidates for AI transformation:
- Financial advising
- Education and professional development,
- Customer/Student support
- Library of Alexandria moment:
 - Knowledge curation: courses and LLMs: opportunities and issues


DIGITAL HEALTH
Volume 9, January-December 2023
© The Author(s) 2023, Article Reuse Guidelines
<https://doi.org/10.1177/20552076231152164>

 SAGE
journals

Original research



Smartphone apps for mental health and wellbeing: A usage survey and machine learning analysis of psychological and behavioral predictors

Germano Vera Cruz ¹, **Elias Aboujaoude**², **Riaz Khan**³, **Lucien Rochat**⁴, **Farah Ben Brahim**⁵, **Robert Courtois**⁵, and **Yasser Khazaal**^{6,7,8}

Objective Despite the availability of thousands of mental health applications, the extent to which they are used and the factors associated with their use remain largely unknown. The present study aims to (a) assess in a representative US-based population sample the use of smartphone apps for mental health and wellbeing (SAMHW), (b) determine the variables predicting the use of SAMHW, and (c) explore how a set of variables related to mental health, smartphone use, and smartphone “addiction” may be associated with the use of SAMHW.

Machine Learning: Ethical Concerns, Global Regulations

- Increasing complexity
- Regulatory and ESG ramifications might impact investment opportunities
- Unconstrained power of “raw” LLMs
- Training data issues — obsolete, biased, prohibited or wrong data
- Impacts on strategy, product and engineering



Brussels, 25.4.2018
COM(2018) 237 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Artificial Intelligence for Europe

{SWD(2018) 137 final}

Questions?

