

HIGHLIGHT**AI for π -day - 14th of March - keynotes, labs and sessions.**

Welcome to the sixth issue of Artificial Intelligence and Data Analytics User Group (AIDA) Forecaster! Designed for AIDA User Group members, AI and Data Analytics enthusiasts, this publication contains timely and relevant information to the AI and Analytics community.

Editorial

Dear Readers,

It is my pleasure to see you reading the new issue #6 of The Forecaster.

AIDAUG is growing, 180 members after only six months of operations. Congratulations! Keep it coming!! Help us to top the 200 this month and spread the word.



Ask your colleagues to join - <https://aidaug.org/join>

In your confirmation email, you will receive your personal invitation to slack as well as your official AIDAUG membership card.

AI and music seem to be taking off. In the last forecaster we reported on AI finishing Beethoven X. This issue sheds light on Apple reportedly acquiring AI Music, a small UK based startup.

This month we gathered a lot of AI related topics.

Default to Open! Red Hat's video about Open Source is legendary. We took advantage and gathered background information around Open Source and companies adapting a Free and Open Source Software strategy.

Hope that you enjoy reading and let me know your ideas and thoughts.

I invite you to send me an email.

And now ... enjoy and please invite your mates

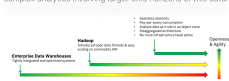
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Data Analytics Corner

Data management and analytics using serverless form factors

It is no coincidence that machine-generated data — such as audit trails, clickstream logs, or IoT sensor streams — tend to be stored in cloud platforms rather than in traditional on-premise data repositories.

This is because the machine-generated data is often originating in the cloud or is, at least, using the cloud as a medium to distribute or act on its data streams. So, it is a natural thought to use the cloud also to conduct more complex analytics involving larger time horizons of this data.



>>> [read the full story](#) (8 min read)

Out of the lab

New Frontiers in Federated Learning: Privacy, Fairness, Robustness, Personalization and Data Ownership (Conference)

Federated Learning (FL) has recently emerged as the de facto framework for distributed machine learning (ML) that preserves the privacy of data, especially in the proliferation of mobile and edge devices with their increasing capacity for storage and computation. To fully utilize the vast amount of geographically distributed, diverse and privately owned data that is stored across these devices, FL provides a platform on which local devices can build their own local models whose training processes can be synchronized via sharing differential parameter updates.

The conference took place online on 6th of December 2020 and was packed with 7 keynotes, 16 tutorials, 60 workshops, 20 demonstrations and 16 competitions.

All the amazing content is still available on the after-show website (free after registration).

>>> [read the full story](#) (8 min read)

>>> [Link to After-Show-Content](#)

AI Corner

HIGHLIGHT

AIDAUG will hold its first planetary-wide event on Pi Day (πday) 2022

The event planning is ongoing. Please save the date.

This AI marathon will feature three keynotes, three labs, and 35 sessions of 30 minutes to ensure a very dynamic event. Sessions should last 20 minutes of lecture and 10 minutes of Q&A, as we want to create a strong network. Keynote speakers will be global players.

Speakers to the session will have to answer the [call for paper](#) (CFP). More details will come soon on: aidaug.org/pi-day.

The final schedule will be published soon.

"I had this idea back in 2020, but now that we have the incredible volunteers in our user groups, this idea can finally be a reality," admits Jean-Georges "jgp" Perrin, AIDAUG's president.



He adds: "Of course, there are many ways you can help as well. Help is great and will contribute to making our first major event a success."

A Slack channel for the event is available at:

>>> <https://aidaug.org/slack/>

Artificial Intelligence: What it is and how it really works

Which is which, and how are they related?

Artificial intelligence (AI) is the general field of computers becoming intelligent. AI started in the 1950s.

Machine learning (ML) is a part of AI. Machine learning is where computers learn from data by analyzing patterns that generate a model, which can be trained with even more data to be more accurate. **Deep learning** (DL) is a class of ML that uses multiple layers to progressively extract higher-level information and interpretation. In image recognition the lower layers may identify curves and lines or edges. A superior layer then looks at the identified sketches to understand, for example, if a photo is showing a cat or car. >>> [Read more on futurism.com](#)

Reducing neonatal mortality rates with AI and Edge Computing

How sepsis diagnosis uses hidden trends found in patient data. [See the video wrapping up the success story.](#)



For more than a decade, Dr. Van Laere has cared for some of the smallest infants in Australian and Belgian NICUs. The lessons he learned while treating infants afflicted with sepsis impacted his life's path. In addition to his practice, he founded the Innocens Project. The organization was established at the University Hospital at Antwerp in Belgium with the mission to speed time to diagnosis and treatment of sepsis.

"At the bedside, I started monitoring data trends. My research focused on signal analysis and trying to extract additional information from vital signs that related to complications, such as sepsis," said Dr. Van Laere. He searched for a technology solution that securely managed and analyzed personal patient data, automated and modernized the diagnosis process, predicted when an infant was trending toward sepsis and triggered an evaluation protocol. He discussed the challenge while biking weekly with his neighbor Dirk Claessens, a managing director with IBM Global Market.

Claessens reached out to IBM Watson Business Center in Munich to partner up and tackle the problem from Van Laere.

>>> [Read the whole story](#) (4 minutes)

Accelerating molecular optimization with AI



The introduced query-based molecular optimization (QMO), is a [framework available on github](#) that can help improve discovery workflows and accelerate the delivery of new drugs to fight the huge problem of antibiotic resistance.

The article is inspired by the publication on "accelerated antimicrobial discovery via deep generative models" in [nature magazine](#) which explains the huge problem we are facing with the costs and time intensive process as of today, typically requiring more than 10 years and US\$2-3 billion for a new drug to reach the market at a success rate of less than 1%.

Drug-resistant diseases claim 700,000 lives each year globally. Which is expected to rise to 10 million deaths per year by 2050.

The algorithm found 20 possible candidates which have later been tested in the wet laboratory. 18 sequences turned out to not meet the required design attributes, but two successfully proved to be biocompatible and showed potent broad-spectrum antimicrobial activity.

The design and implementation of the framework was mainly carried out by Payel Das and Tom Sercu at IBM Watson Research Center, NY.

Other contributing authors for this article are from Facebook AI Research, Amazon Web Services, IBM Watson Research, IBM Research Europe, IBM Research, MIT-IBM Watson AI Lab, Institute of Bioengineering, Singapore, University of Oxford.

A patent has been filed.

>>> [Read the details on research.ibm.com](#) (11 minutes)

>>> [See the public repo on Github](#)



AIDAUG Slack is available at
>>> <https://aidaug.org/slack/>

HIGHLIGHT #2**New Apple acquisition could stream music in real time to suit your mood**

Apple reportedly buys UK startup AI Music



While Nvidia buries its \$40 billion deal to purchase Arm, there are more interesting acquisition news this month. Apple reportedly purchased a small UK-based company that could revolutionize the way music is created and streamed.

In a 2017 interview with Music Ally, AI Music CEO Siavash Mahdavi explained that AI Music is designed to “create a remix for someone that connects with them and pulls them into the song.” AI Music isn’t about creating new music, he explains, but rather tweaking existing songs.

“Later on, they can explore the original version, the acoustic version, the rest of that album, and so on,” Mahdavi said. “But by creating that hook initially by understanding the context they’re in? That could be interesting.”

The AI Music website is down, social media profiles have been removed. The [LinkedIn profile](#) is the only one that is still up. You might want to have a peek at [their web as it was snapshoted by internet archive](#) in late January this year.

So, what makes AI music so special for Apple to acquire them? AI Music claims on their website “to enable users to create on-demand royalty-free music that can be used and shared anywhere. Our technology powers cutting edge dynamic music via elegant, lightning-fast APIs that can be easily integrated to any application.”

[Watson Beat](#), created in 2015 and published on github in 2018, claims: “Using machine learning to spur human creativity is so 2018! Watson has used a combination of reinforcement learning and neural networks to create the Watson Beat.” - this creation is understood as the blueprint for AI finishing Beethoven X (see last forecaster) as well as the mission behind AI music.

Still, it remains unclear what Apple’s plans are for AI music. But they could easily fit into creating an adaptive sound bed for audio ads that hook the customer up with the right mood and sound. This could be a versatile tool to enhance customer experience in any other product area like ads, games, fitness, AR/VR and so on.

[>>> Read Macworld Article](#)

Default to Open! Why is Open Source more innovative?

Companies with an open source strategy are to triple this year.

To be innovative you have to think out of the box. You have to leave your product aside, think “How could I use this in a different way?”. The other day I attended a presentation about open source commercial products. There was this Heart Health tracker for avid runners or cyclists. And the source code was open. So, someone forked the project and thought: “Why don’t I monitor my mothers heartbeat to understand when she needs help and alert myself via my preferred messenger platform?” instead of buying this super expensive alert system. That is what open source is about. It’s about enabling people to use your product in ways that you never thought of.

And then there is this rising star in the scheduling meeting market: cal.com - they operate as [an Open Startup](#) and [publish their KPIs](#).

Cal.com CEO, Bailey Pumflett, summarized his motivation and [reasons for going open in his blog post](#). TL;DR: “Being a COSS startup is essentially playing the long game. You won’t capture revenue from people that self-host your product on their own, but you hope that the traction of open source puts you on the radar of big companies that could sign a bigger deal with you.”, Bailey explains.

Open Source Initiative



- >>> [All Things Open 2022](#)
- >>> [Mercedes Benz FOSS strategy](#)
- >>> [Red Hat documentary](#)
- >>> [IBM open source strategy](#)
- >>> [Top contributing companies](#)
- >>> [Git-Star Ranking](#)

Conferences

- March 14th, 2022 "24h AI for it-day", Virtual

24h hours of AI, around the world and around the clock. This AI marathon offers 3 keynotes featuring global players, 3 labs and 35 sessions.

00:01 am GMT | 11:59 pm GMT - [See details and register for free](#)



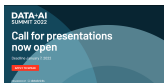
- International Conference on Artificial Intelligence and Applications, 2nd May 2022, New York

ICAI is a prestigious event organized with the motivation to provide an excellent international platform for the academicians, researchers, engineers, industrial participants and budding students around the world to SHARE their research findings with the global experts. [More Details](#)



- Data+AI Summit, June 27-30, 2022, San Francisco

The success of Apache Spark has accelerated the evolution of data teams to include data analytics, science, engineering, and AI. The summit brings together thousands of data teams to learn from experienced industry professionals about the convergence of data and AI. [See more Details](#)



Resources

AIDAUG on Slack - [members-only slack](#)

Homepage of [AIDAUG.org](#) - sign up as a member, it is free.

RFE (Request for Enhancement) is the place where you [let IBM know your ideas](#)

[IBM Research Lab](#) - Inventing What's Next



Discounts for AIDA members

Exclusive offerings that are only available to AIDAUG members.

Want to read a good book? Are you thinking about renovating your computer equipment? See these exciting discounts we got for you.

Manning Publications

... is offering 50% off everything in [their store](#) to AIDAUG members. This discount is valid for e-books, live projects, paper books...

It's a fantastic discount that they have never done before. This offer is (for now) only valid until end of February.

Use code `perrin50` to get the discount at check out.

If you do not know where to start in their catalog, start [here](#).



BBST Bug Advocacy Summary eBook

The must read for any Tester and QA.

"This booklet can help you be a more effective and relevant tester. I must disclose this: I don't believe the job of a tester is to improve the product." - James Marcus Bach

Editor's Note: I reviewed the eBook. What can I say? Testing and reporting bugs is art. Getting bugs fixed is hard work. This booklet is just the entrance door.

AIDAUG members get 50% with [this Coupon Link](#)



Closing & Credits



Thanks for reading - make sure to sign up to the AIDAUG.org website to receive discounts on various events. And as I wrote in the Foreword, you will have access to curated topics on weekly basis from now on.

There is so much going on in AI and Data Analytics, that it is sometimes hard to filter out the good stuff from the marketing buzz. I truly hope that curating the topics helps you to learn interesting details.

This newsletter has been carefully crafted in Barcelona for AIDAUG members. Let the editor know your thoughts. You can reach out to him via email at raif@aidaug.org

Let's get in touch on [AIDAUG Slack](#)

Save the Date

14th of March - [AI for PI-day](#), 24h planetwide conference.