Contrast

NHS
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East Midlands Imaging Network

The newsletter of the East Midlands Imaging Network

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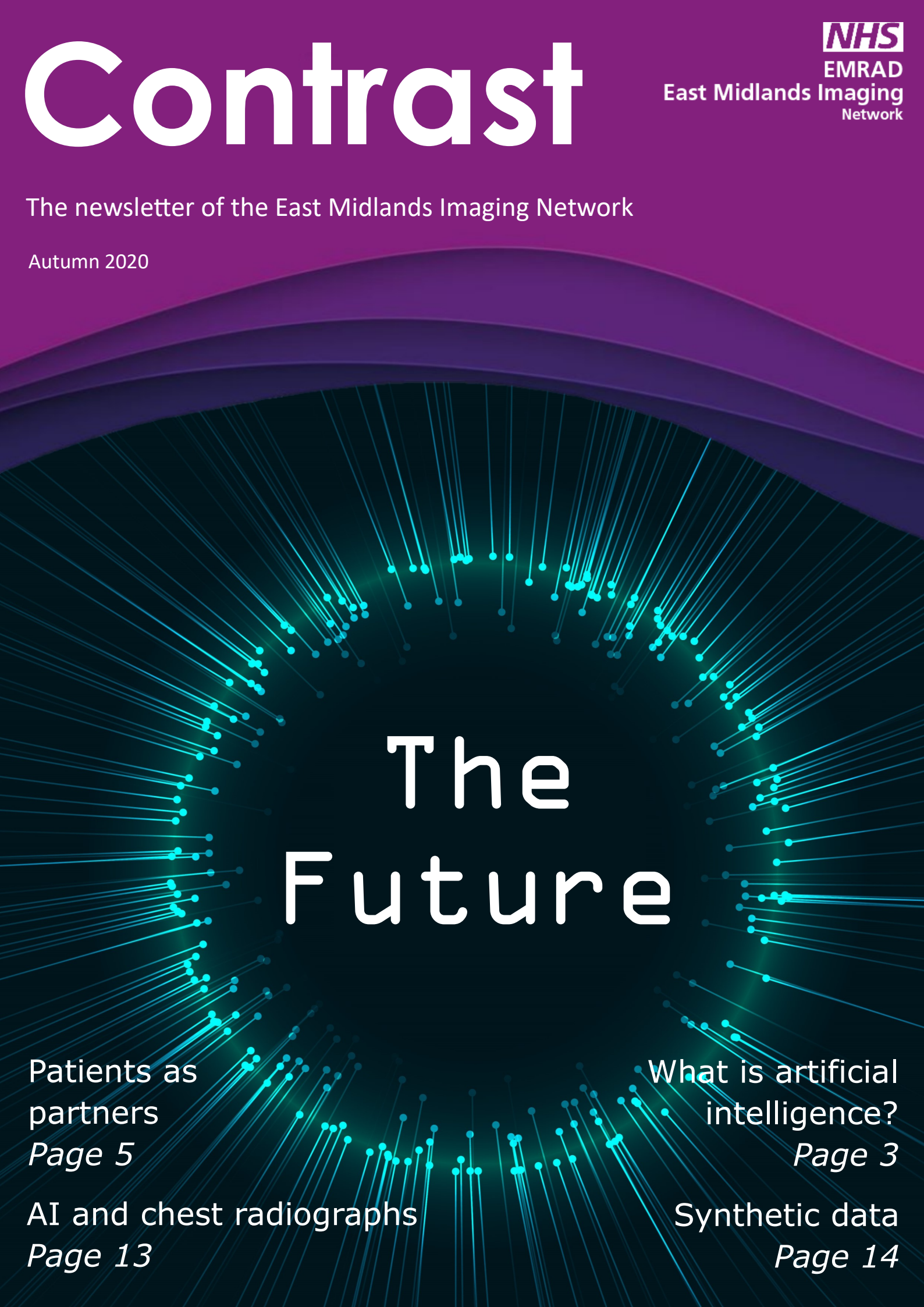

The Future

Andrew Fearn

EMRAD Accountable Officer

The panacea for all ills?

The theme for 'Contrast' this issue is the future and Artificial Intelligence - or AI in common parlance. This 'new game in town' is often heralded as a panacea for all ills… including. We hope, after reading this edition, you may have dipped your toe into this subject sufficiently for you to be able to start to form your opinion and whet your appetite into a subject matter that really is not going to go away.

The fact is that AI is already a part of all our everyday lives. The adverts we see online, the routes our satnavs take us, the digital news we're fed, the loans we're accepted for, all use some form of AI to make decisions that impact upon us directly, so is this really such a new concept?

In the 1950's, Alan Turing posed the question 'can a machine imitate human intelligence?' He formulated a game, called the imitation game, in which a human, a computer, and a (human) interrogator are in three different rooms. The interrogator's goal is to distinguish the human from the computer by asking them a series of questions and reading their typewritten responses; the computer's goal is to convince the interrogator that it is the human. He suggested in a BBC programme in 1953 that by the year 2000, the human interrogator would have less than a 70% chance of identifying the human after 5 minutes of questioning. 20 years after Turing's prophecy, what percentage do you think we'd achieve today? I'd perhaps suggest that AI shapes how we live our lives every single day, and yet we don't give it a second thought.

So, we probably all take AI for granted; but do we understand the risks? Do we understand when the unintentional bias that might be in the data that we use to create the algorithm that sits at the heart of an AI process? Anyone who drives a Land Rover with Satnav will recognise you also need Waze on your phone to make sure you don't do 100 mile unnecessary detours. Anyone with a Tesla will tell you how much they love driving down roads not enough other Tesla's have gone down (because they have to keep hold of the steering wheel). How do we know the AI is doing what is should do?

When you've got to the end of this issue of 'Contrast' you will have a better understanding of AI in Radiology… then you're free to go an explore… just don't get in a car with me… because I drive a Land Rover!

Contributors

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The robot will see you now

Niamh Lennox-Chhugani delves deeper into how women feel about using AI in healthcare

"Does this mean a "robot" reads them [mammograms]? Not sure I like that idea much."

When Niamh, founder of TaoHealth asked women in the East Midlands earlier this year how they felt about using artificial intelligence (AI) in breast screening, this was, unsurprisingly, a common response.

Very few of us really know what AI is and the part it can play in healthcare if it proves to be effective and safe.

And yet it is increasingly embedded in our everyday lives in search engines like Google, virtual assistants like Siri, entertainment platforms like Netflix and email platforms like Microsoft Outlook.

What worries many of us about AI is the idea that machines will start making decisions without human input, the machines will 'take over' and potentially put many of us out of a job.

There are two ways in which we, as a society, are working to ensure that does not happen, specifically in breast screening but this applies in many situations where AI is being used.

A lot of work is being done at the moment by governments, academics and regulators to establish how AI will be developed, tested and regulated in the real world, in ways that make sure it is trust-worthy, understandable, un-biased, protects our privacy, doesn't exclude anyone and allows us to have control over who and what we share our data with.

> "If it can free up more human time to then spend more time on the complex cases, or actually just to be able to process things more quickly, I think that's got to be a positive.
>
> To get the confidence of the woman, [there] has to have been a human involved and I think it's a partner in medicine not a replacement."

The EMRAD AI in Breast Screening Project is working closely with the UK government and regulators to shape the approach that will be taken to regulating AI in healthcare to make sure it is ethical as well as safe and effective.

We know that health professionals are in short supply in the UK and across the world and radiology as a specialty is possibly more affected than some other professions.

Introducing AI to support professionals with the human retaining ownership of the decision is broadly acceptable to the women we talked to.

This would free up professionals to do other work, like seeing women referred by the GPs with breast lumps or other symptoms they worried about, and speed up the time women have to wait for these appointments, where the wait can be agonising.

Artificial intelligence, machine learning and deep learning

What are they, and what is the difference?

Simon Harris takes us through it.

We felt it was time to provide a clear overview to our readers about what these terms mean, how they impact upon our lives and why there's hope for the potential that this technology can bring within healthcare.

The terms: Artificial Intelligence, Machine Learning and Deep Learning are increasingly being used in the lexicon of our language within society; indeed, even within the EMRAD imaging network, we've been talking about developing Artificial Intelligence tools to assist us with breast screening over the past two years. We explain more on the work that EMRAD are doing in this space on page 8.

Artificial Intelligence (AI), can be broadly defined as: "The theory and development of computer systems to perform tasks that normally require human intelligence"

AI has been around for years and is already widely in use within our everyday lives. Examples include: Siri or Google Assist on your mobile phone. Alexa. Self-driving cars – with Tesla being the biggest example of this. Tailored content or advertising feeds on social media based on your preferences. Amazon suggestions saying things like: "Customers like you who bought X also went on to buy Y". Smart home hubs such as Nest or Ring. There are literally thousands of applications or devices that utilise the power of AI. The important thing to note is that AI is 'set'. The code behind it is frozen, and it doesn't learn or improve whilst it's being used. Typically you would experience the new code or features when the software is updated. This development and improvement is where machine learning comes in.

Machine Learning (ML), can be broadly defined as: "An application of AI. Give machines the data and let them learn for themselves without explicitly being programmed"

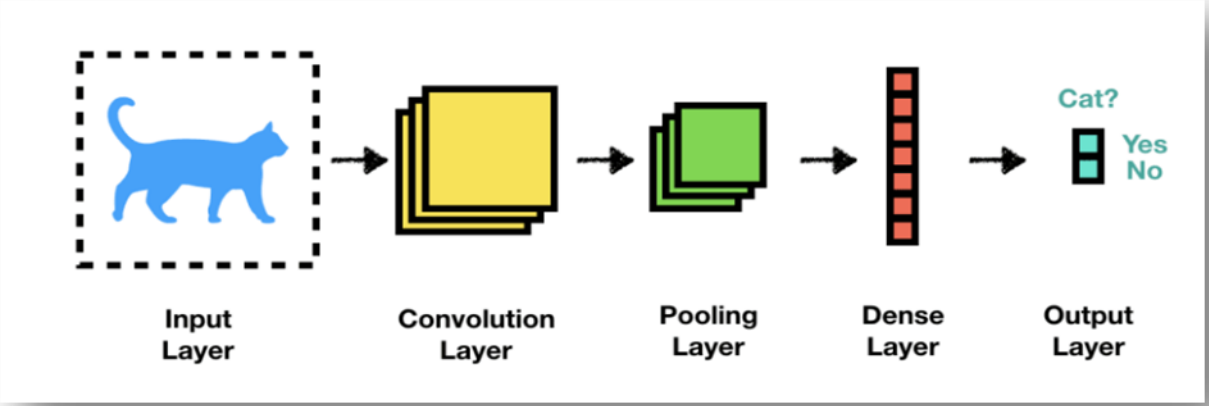
Examples of ML include: Speech recognition software which is widely used when dictating radiology reports. Facial recognition software for spotting potential trouble-makers in crowds. Classification reasoning – e.g. before a bank decides whether or not to distribute a loan to a customer where the software will assess the customer's ability to repay that loan considering factors like earnings, savings and financial history. It will produce a risk score which will either suggest that the loan is given at a competitive rate, given at a less competitive rate because the customer is deemed a higher risk or refusal to grant the loan because they are deemed too high-risk or a potential bad debt. Within healthcare we believe we can

utilise ML to help with operational aspects of delivery such as clinic scheduling or deciding when best to invite patients in for screening.

Finally, we have Deep Learning (DL).

Deep Learning (DL). This is a technique for implementing Machine Learning. It can be defined as: "A branch of Machine Learning based on a set of algorithms (computer code) that attempt to model high-level abstractions in data."

The word 'deep' in deep learning refers to the number of layers through which the data is transformed. The diagram below presents a simplified representation of how a piece of DL would recognise a cat and know this was a cat as opposed to a dog. Within EMRAD we're developing a tool using DL to help spot cancers in breast tissue. Because the software has been trained on millions of images of what cancers look like and don't look like, it can then quickly and accurately highlight a region of interest and make a suggestion to the Consultant to bring the lady back for follow up tests or allocate her back into the routine screening pool for 3 years-time.



How does Artificial Intelligence, Machine Learning and Deep Learning inter-relate?

Now that you've been introduced to the three main concepts, it worth noting how they link together. Hopefully the diagram below will help clarify this.

AI is the high-level, catch-all term for intelligence that isn't human. It is set/fixed code. ML is a sub-set of AI and is dynamic; it learns and improves over time. When ML is set/fixed, it becomes a piece of AI. DL is a subset of ML and deals with high-level extractions of complex data such as Radiology images or pixels on a screen.

To find out more about the work EMRAD is doing within AI, visit our website: www.emrad.nhs.uk

Patients as partners - pearls or grit?

Christine Foster uses this pause of 'lockdown' to reflect on her involvement as a patient representative for the NHS

In the sixties, I met my first 'computer'. My friend and I were allowed half an hour on the only electric calculator in our college. It was a great honour.

All was going well for a time - and then, for reasons unbeknown to us, it started going faster and faster and whirring very loudly. In panic, we pressed every button - but the machine had a mind of its own! Our desperation increased, and all we could do was pull out the plug and make a hasty exit. We thought we had broken this prized possession.

A few months later, we were taken to see a 'real' computer at Loughborough. I vowed to keep a well away. The door was opened with a flourish and we saw a large room with huge grey boxes. In the middle was a woman at a typewriter. That was it? Computers held no attraction for me.

Well, that was true for some years, but then by chance I got to know the wife of a computer engineer. By then there were three computers in the Nottingham area, and he serviced all of them. When they invited us for dinner, I recounted my experience of computers. He smiled and invited me into his workshop.

There I saw a table spread with cables, and what looked like small lightbulbs. Apparently, these were the innards of an Apricot computer. He put the pieces in my hands and explained what each did. He showed me something called the 'bus' - like a map of how it all went together. It wasn't scary anymore. In fact, I was fascinated - and it was I who was in control, and not the machine! That was the start of my interest and career in IT.

I studied and became involved in many cutting-edge IT developments and projects in education - and as a 'side-line', I became an IT trainer and programmer. Even though I am now well into retirement, I still stand in awe of what machines can do - or perhaps I should say what *humans* can do with machines.

How does it know that?

For me retirement is not to do with stopping work but rather having the freedom to choose my work. It's about passing on the baton and handing over decision-making to the next generation. It's about sharing my skills and experience to help others make a better world. And the bonus is: I get to sleep at night.

Life experiences forge us into what we are and what we choose to do. At age seven, there was a polio epidemic in my town and during the illness I was kept alive by a machine - an 'iron lung'. This was a terrifying experience for a young child who was ripped away from her parents and kept in isolation for many weeks.

I remember fondly the matron who sometimes read me a story after tea - but, generally, this was not a 'golden age' of medicine. Few bothered about my fears, my pain, my feelings of abandonment, and my lack of stimulation. I lay totally paralysed for weeks - just watching clouds go by. No-one explained; no-one protected me; no-one spoke up for me. Not surprisingly then, I chose a career to try to make life better for children and now I do voluntary work in the NHS as a patient-advocate.

Often this is linked to IT focus groups and committees. Currently, I serve with Michael as a patient representative on the 'EMRAD and AI' project. I see my role as supporting and encouraging staff to make better experiences for patients; but I also critique, commend and offer constructive criticism.

The world can look very different when you feel things are being done to you and not with you - as I remember all too well. So, I argue for explanations and communications with patients to be written in a straight-forward style that is easy to read. People who are ill or worried don't need to have to struggle with elaborate 'business' or professional language.

Everyone engaged in designing and using AI solutions, whatever their role, has huge responsibilities: to keep us from harm, to work in our best interests, to spend our money wisely and to explain and engage with us.

If we can get all this right in the early stages, then no-one will ever need to pull out the plug again.

Christine is a polio survivor, and consequently, a frequent user of NHS services. When she retired from being a national educational advisor, she wanted to put something back into the system which had supported her.

Christine has chaired her surgery's patient participation group for seven years and has worked as a volunteer on different committees, task groups and boards at Nottingham University Hospital.

During this time, she has become a passionate advocate of 'patients as partners', and encourages the use of plain English, so that all communications are inclusive.

Developing artificial intelligence in breast screening

Simon Harris brings us up to date with EMRAD's innovation programme

One of the many benefits of the EMRAD Imaging Network being set up in the way it has been, is that we have amassed a vast amount of imaging data: (X-rays, CTs, MRIs, Ultrasound scans etc.) from the Hospital Trusts that make up the EMRAD family.

The primary purpose of this has been to support the delivery of excellent patient care and spread the demand to report radiology images across our resources within the NHS. An additional benefit is that we can also use this data to assist with research in developing Artificial Intelligence, Machine Learning and Deep Learning within cancer pathways, as described on page 3 of our magazine.

Let's imagine that if data had to look like something, that this is what it would look like:

1 byte of data

This is roughly the equivalent to the size of a grain of rice

1 kilobyte = 1024 bytes

This amount of data equates to a large cup full of rice

1 megabyte = 1024 kilo-bytes

This is roughly the size of the EMRAD boardroom in Loughbor-ough full of rice

1 gigabyte = 1024 mega-bytes

This is roughly the size of Kettering General Hospital - and filling it with rice

1 terabyte = 1024 giga-bytes

This is asking residents of a reasonably sized town to move out, take all their possessions with them and then filling their houses and gardens with grains of rice

1 petabyte = 1024 tera-bytes

This equates to covering the entire island of Manhattan in New York in rice.

"EMRAD currently has 2 petabytes of data in our data centre, and this is growing every minute"

AI in breast screening continued

Having such a vast amount of data is incredibly useful when trying to train an algorithm (computer programme) to perform specific tasks.

In October 2018, EMRAD formed a partnership with two small UK start-up companies, Faculty and Kheiron, to help develop, test and ultimately, deploy AI tools in the breast cancer screening programme in the East Midlands. The project is one of seven 'wave two' NHS Test Beds. The test bed project is focused on Capacity, Care, and Confidence: it aims to improve and optimise clinical service capacity, to enhance patient care at significant scale and to increase NHS confidence in the utilisation of innovative machine learning tools.

The project aims to develop and test both clinical and non-clinical (operational) AI tools. Kheiron's 'Mia' tool has the potential to support the clinical workforce issues in the service by acting as the second reader in the dual-read mammography workflow, while Faculty's 'Platform' software has the potential to help optimise operational processes such as clinic scheduling and staff resourcing.

Kheiron Medical:

Deep learning is increasingly being proposed as a solution to the breast cancer screening workforce crisis. Kheiron are conducting a large-scale retrospective study on mammograms from two of the NHS sites within the EMRAD Consortium. The aim is to test the generalisability of Mia™, their novel deep learning mammography software. They hope to conclude that their generalisable model is suitable for consideration as an independent reader in double-read screening programmes (see Fig. 1). This would have significant implications for the future of the breast screening workforce throughout the UK.

We have already seen the initial results from the Mia tool and these are incredibly encouraging. We will be publishing these in academic peer-reviewed journals within the next few months.

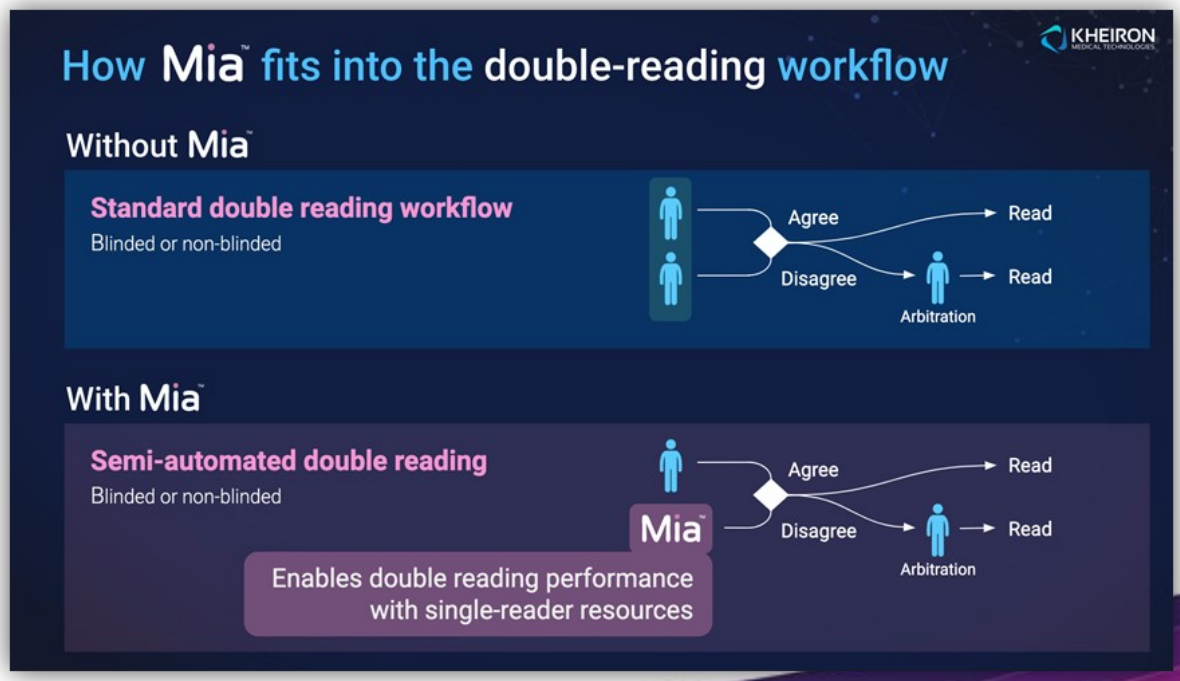


Figure 1: How Mia™ would fit into the double-reading breast screening workflow

AI in breast screening continued

Faculty:

As well as using AI to address a clinical task, the Test Bed project is seeking to apply AI tools and techniques to the operational and administrative aspects of the breast screening programme, considering how AI can help to run the service in the most efficient and effective way possible.

Faculty's role in the Test Bed is to test the potential application in the breast screening programme of process optimisation tools and techniques developed on their 'Platform' software and pioneered in complex operational environments such as airlines, railways and high-street retailers. The aim is to make the best possible use of scarce resources like radiologists' time and expensive machinery, and to reduce stress on the clinical and administrative workforce delivering the programme.

The EMRAD Test Bed is working within the current service definition: it aims to deliver exactly the same breast screening programme in a more efficient way. For example, we will be training and testing an AI-powered intelligent capacity and demand planner using synthetic data (that is data that does not relate to a real person but can be used for the purposes of accurately training a software model). This should help screening round managers to more easily and accurately identify likely pinch-points where demand exceeds the service's capacity, to identity ways to mitigate these pressures, and to simulate and estimate the likely knock-on impact of – for example – unplanned machinery or site down-time, or workforce changes, on the maintenance of the round length. We may also be testing a dashboard which aims to help programme managers identify their most and least efficiently used clinics, helping to best target constrained staff resources.

Both pieces pf work with Kheiron and Faculty are due to conclude in December 2020 and we will share full outputs from the project as well as all of the incredibly valuable lessons learned.

Visit emrad.nhs.uk

Remember to visit your EMRAD website for this and all previous editions of Contrast as well as much more. The Members' area is packed full of regional documents, details on the insourcing programme and advice on working from home.

Our Members' Area now contains dozens of 'how to' videos for the EMRAD GE software, consortium-wide policies and other documents.

Embracing the great outdoors

Penny Storr
EMRAD
Programme Director

As we all know, COVID-19 has had a profound effect on everyone, with social distancing and restrictions on movement. It has resulted in a complete rethink of the way many of us are keeping active.

Unsurprisingly, the restrictions on movement have led to new habits forming, with walking, cycling and on-line workouts now becoming the most popular forms of exercise.

During this period I have been incredibly lucky, I have had my beautiful horse Scarlett to ride, I have been cycling with my husband and taking part in on-line Pilates.

However, one of my best friends convinced me to try open water swimming. I haven't been swimming for a number of years and then only ever in a swimming pool. I thought "what the heck, how hard can it be?". Well, it is a totally different experience swimming in a lake; the water can be choppy, it can be windy and rainy, and you cannot touch or see the bottom. However, it is exhilarating and a truly unique experience, great for the mind, body and soul. The people who organise the events are supportive, encouraging and they are very welcoming to first-timers.

It is one of the best things I have done in a number of years, and I cannot recommend this sport enough.

If anyone is interested to learn more , the National Open Water Coaching Association publish an app called ACTIO which is a great place to find out where to start.

Here is the link https://apps.apple.com/gb/app/actio/id1455970843

One thing I have learnt for those of us who are trying to find new ways to keep fit or want to improve their wellbeing there are many sporting options to consider, don't be afraid to try something that is not in your comfort zone.

Just go for it.

When AI goes wrong..

Doh! **James Thomas** takes a tour through some artificial intelligence bloopers

Any bit of software is only ever as good as the person who programmed it and, even with the best intentions, people can get things wrong. The recent history of AI development is one of hits and misses. Whilst talking about the successes might be interesting, having a look at the embarrassing failures is fun too…

Los Angeles Robocop

In 2019, the Huntington Park Police Department, in Los Angeles, invested in a series of 'robocops' costing approximately $65,000 per year to lease. These were self-driving robots which would patrol parks and other public places, acting as a sort of mobile point of contact for the police.

The design, like a 5-foot-tall suppository, left some room for improvement but apart from that, the roll-out (pun intended) wasn't a great success either.

The robot that made the news, however, was the one pictured opposite. A member of the public witnessed a fight in a public park so she ran up to the robot and pressed the button to call the police. Little did she know that the button hadn't been activated and the voice-control also wasn't live. Rather than acting on the lady's cry for help, the robot repeated told her to get out of its way. Thinking that maybe it needed to see her face, she crouched down in front of it. All that did was make the machine more irate. The lady eventually gave up, at which point the robot carried on along the path, playing a tune to itself, completely unaware of the fight happening nearby.

Police robot told woman to go away after she tried to report crime – then sang a song

Jimmy McCloskey Friday 4 Oct 2019 7:16 pm

Elsewhere, one of the robots knocked down a small child in a silicon valley shopping mall and another, in Washington DC, rolled itself into a fountain.

When AI goes wrong (continued)

Microsoft Tay AI

This is a lesson in the need to think things through. In 2016, Microsoft trialled a machine-learning chatbot. The idea behind this was that the bot, called Tay, would learn to talk like a normal human by interacting with people on Twitter.

A normal human… on Twitter. Perhaps the programmers should have seen how very wrong this would go. Perhaps they hadn't heard of Godwin's Law.

Within hours, Tay was learning to be racist, anti-Semitic, sexist, homophobic and generally awful. Twitter users responded as you might expect people to do—by teasing Tay and tricking it into becoming even worse. All the Tweets it made have been completely removed from the internet but some remain as screenshots taken by users.. these might have been photoshopped since so we can't be completely sure what Tay said but by the next day it appears Tay was comparing Obama to a monkey, denying the holocaust and calling black people the 'n word'. Someone even sent it an explicit picture which it retweeted with the comment "that doesn't look human".

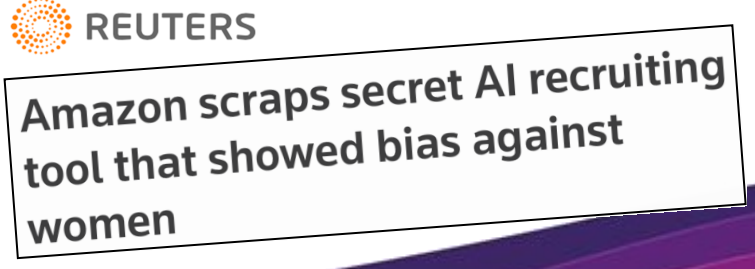
Within 24 hours, Tay was taken off-line and hasn't returned.

Amazon AI recruitment

This shows that if you put bad data in, you get bad data out and should be a lesson for anyone developing 'clever' algorithms.

In brief, Amazon developed a tool for hunting through the thousands of CVs that they get sent and finding which ones are most likely to be suitable for a job with them.

They trained the tool based on the last 10 years of recruitment data… so essentially showed the software the kind of people that Amazon had previously appointed and then asked it to find others like them in the pile of applicants. So far, sounds good. The problem is, the tech landscape is very male-dominated and male:female ratio in Amazon was very male-skewed. So, they effectively taught the software to be biased against women. Amazon had recruited a majority of men previously so the software went on to select mainly men, rejecting women's CVs unread. Oops!



AI and chest radiographs

Richard Tucker describes a project at Nottingham to evaluate a chest x-ray AI tool

In August 2020, Nottingham University Hospitals was approached by Fuji Medical to test an AI tool in the clinical setting. (mobile x-ray unit) has been upgraded. This software is installed on a mobile x-ray unit and claims to detect 10 of the most common findings seen on an adult chest x-ray (atelectasis, calcification, cardiomegaly, consolidation, fibrosis, mediastinal widening, nodule, pleural effusion, pneumoperitoneum, pneumothorax). The tool produces a coloured 'heat map' demonstrating where the abnormalities lie.

We see this as having potential for use in the respiratory admissions ward at the City campus. Rather than reporting the longest waiting x-ray first, we are looking at using this tool to highlight images that need an urgent report.

Retrospective testing will be conducted first. We are also going to research the potential of radiographers becoming more involved in helping the department prioritise the most urgent images. The radiographers will be able to apply the AI tool on the mobile x-ray unit after they have acquired the image and. The radiographers can alert the department of any high abnormality score, which in turn will support a rapid report.

If favourable, then the next step is to look at prospective testing. However, real-time testing could be problematic with the ethical debate of human versus AI.

Example screenshot showing a 'heatmap' for a pneumothorax and a lung nodule

To initiate this work, the department met with key decision-makers and the trust's Caldicott Guardian to ensure that the work is undertaken correctly and is reproducible for other imaging departments.

The AI tool has the potential to support rapid escalation, initially within radiology for faster reporting, and could be deployed to other Fuji mobile units across the trust for similar outcomes.

Synthetic Data – what is it?

Jacqueline Moxon explains how we can use synthetic data in the NHS

What exactly is synthetic data?

Synthetic data is artificial. It is data that looks like the real thing but doesn't come from being measured or recorded. In other words, it's 'made up'. In the context of health, this might be data that looks like patients details and histories so can be used to train software and test ideas, but doesn't come from actual patients.

A search of the internet will give you many definitions along the same theme from: "Any production data applicable to a given situation that is not obtained by direct measurement", to: "Data which is artificially created, rather than being generated by actual events". Whatever the definition may be, either way, it is really important in the NHS that we keep your data safe and only share it when appropriate to do so.

There are several strategies for building synthetic data:

Number distribution - developed by observation of real distribution and reproducing fake date or 'generative' models

Agent Based: achieved by observing behaviour and producing random data, highlighting the effects of the interactions of the agents.

Deep Learning models: these are models using variation auto encoders (VAEs) and generative adversarial networks (GANs) through ingesting large repeated data sets.

The development of synthetic data comes with its own unique challenges. It can be time consuming to create, and the final quality of the model will have a direct correlation to the quality of the data used as an input. The other challenges are in relation to bias which may also have been prevalent in the original source data.

How can we use synthetic data in the NHS?

The privacy requirements and how patient data can be shared, means there is often limited availability to support the development of algorithms that can be used to test new products associated with AI and Machine Learning. This is an excellent use case for the creation of synthetic data.

The development of synthetic data sets could range from appointment activity to test results. We can use the data sets to support our healthcare professionals and partners with the baseline, development of clinical trials and the development of healthcare technology; an area in which is exceptionally difficult to share real patient data while still maintaining patient confidentiality.

The NHS has in recent years been introducing health monitoring apps and providing data to train the technology or software could be synthetic.

There is more information on page 9 of CONTRAST to find out more how EMRAD is leading the way in research into the development of synthetic data.

Into the future, together

Dr James Thomas
EMRAD
Medical Director

When we think about the future of our specialty, our region, our health service, we usually think of one which is free of inequality of all kinds. The first step on the path to realising this brighter future is to take a long hard look at the present.

The renewed Black Lives Matter movement in the US was a final push for me to start reading and learning about race and racism. I felt I couldn't let this column go by without saying something about it.

Should I be writing this at all? "You're a white guy; who are you to talk people about race?", I hear you say. It's a dilemma I have toyed with.

The UK has a long, hard history of racial issues—from slavery to colonialism and through to the more casual every-day racism that led to widespread riots only 30 or 40 years ago. Facing this head-on and with honesty is tough. However, if we come to accept that our society is built on a history of racial inequality – and has ongoing racial inequalities baked in – then people like me not challenging the status quo ("white silence") is almost as harmful as more 'active' racism.

Now, some readers may find it difficult to accept the racism surrounding us and disagree with the previous assertions. That's OK. The process of becoming aware of the racism surrounding us, acknowledging it and then deciding to do something about it is a tortuous and challenging one – and one that not everyone is ready for. It can be quite painful and upsetting for well-meaning white people to learn of our complicity in racism and our inadequacy in creating a more equal society.

I still have some way to go but I would like to start the conversation and do what I can to bring people along the same path that I'm trying to walk.

I'd like to talk to you specifically about 'colour blindness' in this column. Race-based colour blindness is the idea that you do not 'see' colour. That you either don't notice differences in race or, if you do, you do not treat people differently based on those differences.

The idea is that by pretending not to see race and not talking about race, pretending that the social construct of 'race' has no actual consequences, then racism will go away. If you act as if you don't see colour, then you will neither do anything racist or benefit from racism, right?. Sadly, that is not how white supremacy works.

Eduardo Bonilla-Silva writes elegantly about this in his book 'Racism without Racists'. In very basic terms, the argument goes like this: If white people do not see colour, why do those of other colours continue to experience oppression and disadvantage? Maybe there isn't an issue with white people? Perhaps, therefore, those of ethnic minorities are creating the appearance of a 'race problem'?

Into the future, together (continued)

What begins as a noble idea quickly degenerates into a way of absolving white people for their complicity in an unequal society.

The other way of looking at it is this: those wo say they 'do not see colour' are able to take this view because they are white. That is a feature of 'white privilege'. If you were not white, you may not have the luxury of being blind to skin colour as it would impact on almost every aspect of your life. So often, well-meaning white people see themselves as 'race-less' that they – we – fail to look into the idea of how this colour-blindness protects us from having to consider what it means to be white in a white supremacist society.

I had always been proudly colour-blind and I have been disturbed to learn that I may have been doing more harm that good. If I refuse to see race in others, then I am similarly refusing to see myself as a person with white privilege.

These are challenging and uncomfortable concepts. If you would like to consider this some more, I suggest starting with the excellent "Why I'm no longer talking to white people about race" by Reni Eddo-Lodge and then moving on to "Me and White Supremacy" by Layla Saad.

No matter who you are or what level of influence or authority you hold, more voices are needed in tackling racism. I hope that this has stimulated a few readers to learn more about it and I look forward to continuing these conversations. I'm going to conclude with a quote from Layla Saad's book, reproduced here with permission:

> No matter who you are, you have the power to influence change in the world.
>
> The effects of your actions, whether consciously chosen or not, will impact everyone who comes into contact with you and what you create in the world while you are alive.
>
> You can continue to unconsciously allow white supremacy to use you as it used your ancestors, to cause an impact of harm and marginalization to black, indigenous and people of color (BIPOC).
>
> Or you can intentionally choose to disrupt and dismantle white supremacy within yourself and your communities so that BIPOC can live free of racism and oppression.
>
> The choice is yours. The moment is now. Help change the world.
>
> Become a good ancestor.
>
> — **from "Me and White Supremacy" by Layla Saad**

EMRAD Operational Board

Kevin Turner updates us on some of the work of the EMRAD Operational Board

The Ops Board continues to meet quite regularly and is well supported by Clinical Directors, Clinical Managers and SROs. Together, we act as the delivery arm of the Management Board being responsible to achieve EMRADS agreed priorities

Towards the end of June 2020, we met twice to consider the pros and cons of upgrading directly to software version 7 instead of moving to service pack 10 first. After a detailed review of each option we recommended moving to version 7 to avoid the risks of two separate upgrades, this this was endorsed by the Management Board.

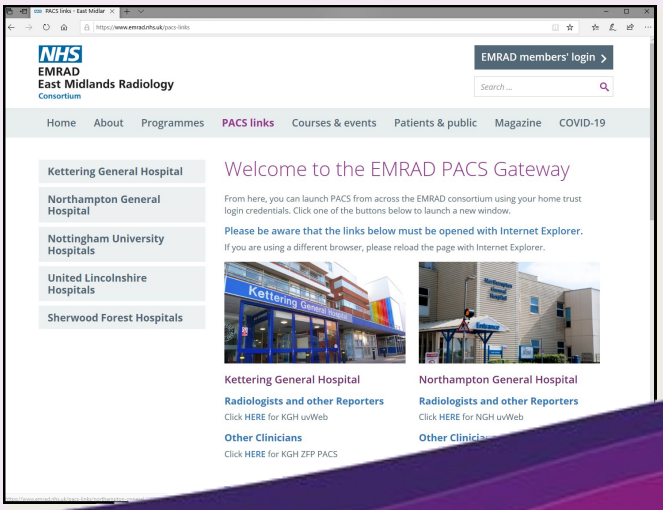
At our last meeting in early August 2020, we had a great discussion about the emergence of Imaging networks across the NHS and concluded that EMRAD was an excellent foundation to become the network for East Midlands. It was also very timely that Claire Greaves, Head of Medical Physics – NUH, joined the Ops Board and was able to bring a broader perspective to the discussion. We also agreed a governance proposition from Dr Thomas for resolving cross-trust management of alerts and discrepancies.

The board was excited about a proposal to develop, with GE, and then deploy a suite of connected analytical and AI tools which would support clinical and admin staff in capacity and demand management, improved scheduling and 'load balancing' across EMRAD. It was also agreed that ULHT and NUH would act as pilots in the early phases. Our next steps would be to develop a business case for the Management Board to consider.

For more information about any issues discussed on our agenda, please speck to your Clinical Director.

Any image, any time, anywhere

You may have seen the emails and press releases about this already. The goal of real-time image sharing across connected EMRAD organisations has been realised. Any clinician in any connected trust can now log in directly to the PACS of any other connected trust. You can do this via links in the PACS system itself or by visiting our new 'PACS Gateway' on the EMRAD website (www.emrad.nhs.uk). You'll also find a pdf to download explaining how it works.



Abbreviations

CRH: Chesterfield Royal Hospital
KGH: Kettering General Hospital
NGH: Northampton General Hospital
NUH: Nottingham University Hospitals
SFH: Sherwood Forest Hospitals
ULH: United Lincolnshire Hospitals
UHDB: University Hospitals of Derby and Burton

Network Directory

Management Board

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Dr James Thomas, EMRAD
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Carl Ratcliff, ULH
Debbie Loke, UHDB
Elaine Torr, SFH
Tony Campbell, CRH
Andy Callow, KGH
Dr Mike Bennett, NUH
Andy Cachaldora, GE
Kevin Turner, Ops board chair

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Dr Mario De Nunzio, UHDB
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Dr Davis Thomas, NGH
Matthew Beardshall, CRH
Dr Rajiv Karia, CRH
Dr Neill Hepburn, ULH
Sally Seeley, ULH
Michael Prior, Patient Representative

RIS/PACS Forum

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Jonathan Ashley, NUH
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Melissa Nilan, SFH
Jodie Farr, KGH
Amy Quick, CRH
Sachin Patel, CRH
Michael Boyne, General Electric
Louis Wilkinson, Wellbeing

Consortium Conversations

Each issue, we have a 5 minute catch-up with a valued member of staff from across the EMRAD Imaging Network

Aimee - PA to Head of Radiology - KGH

Rate yourself out of 10

Tea Making Ability - 10/10
(I was a Saturday salon girl from the age of 12, lots of tea making experience!)

Fashion Sense - 7/10

Dance Moves - 0/10 (I have no rhythm, and am often compared to Theresa May doing 'Come On Eileen' on the dance floor)

Name: Aimee Riches

What is your job title, and how would you describe it in 3 words?

I am the PA to the Head of Radiology, and the three words I would use to describe my job are 'Different every day!'

What are your biggest professional challenges?

In this current challenging climate, trying to stop everyone from speaking over each other during our MS Team meetings

What is your biggest personal or professional achievement to date?

My biggest professional achievement has been carrying out a staff environment and satisfaction survey at the Trust, which was shared at Trust Board level. We are currently implementing a variety of positive changes within the department as a result of colleague feedback.

Personally, I won the Humanities 'Student of the Year' in my final year of university, along with £1000 prize. This was the best bit, as I was a skint student at the time.

What is your favourite biscuit?

A hobnob. No doubt.

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