

Generative Artificial Intelligence (AI) With Metahuman

DAISY

UKHSA CONFERENCE

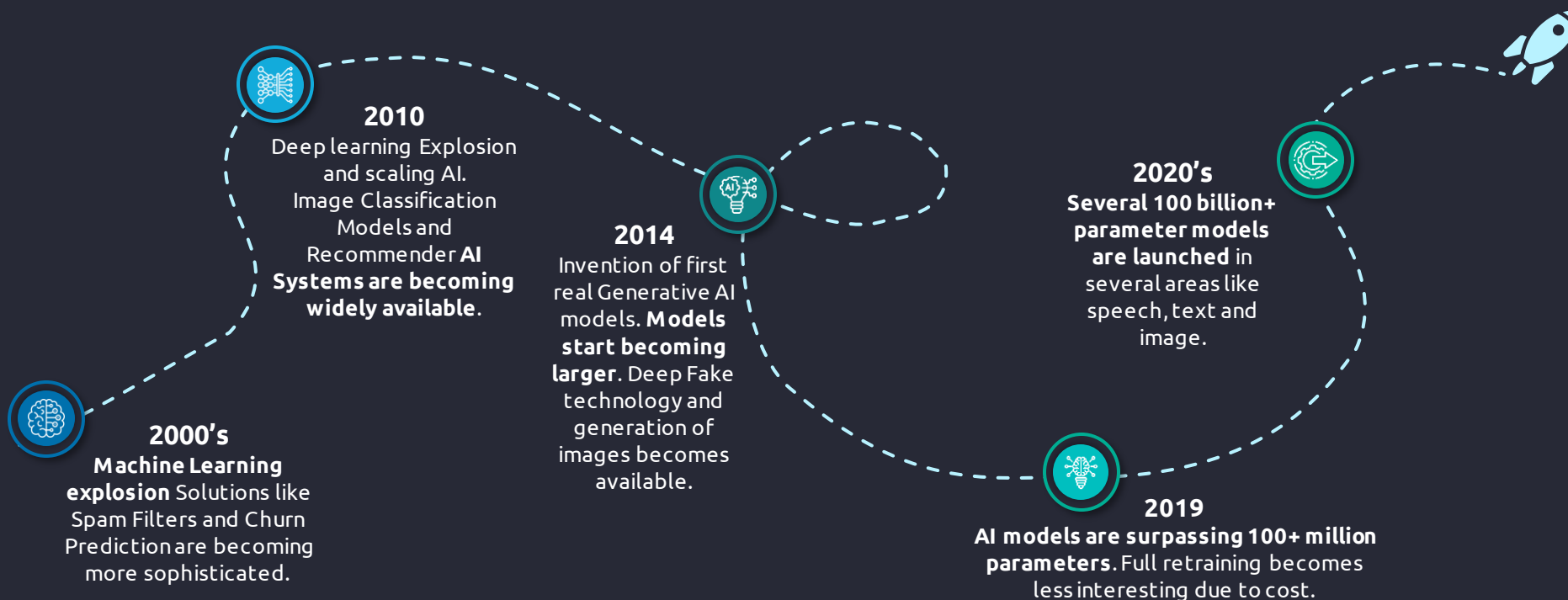
November 2023

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You Want



THE NEW PARADIGM OF GENERATIVE AI



What is next?

integration and adoption

Large Model development for most companies becomes unfeasible without external Gen. AI expert support

New Models And Use Cases For Generative AI Companies Are Being Developed Almost Weekly

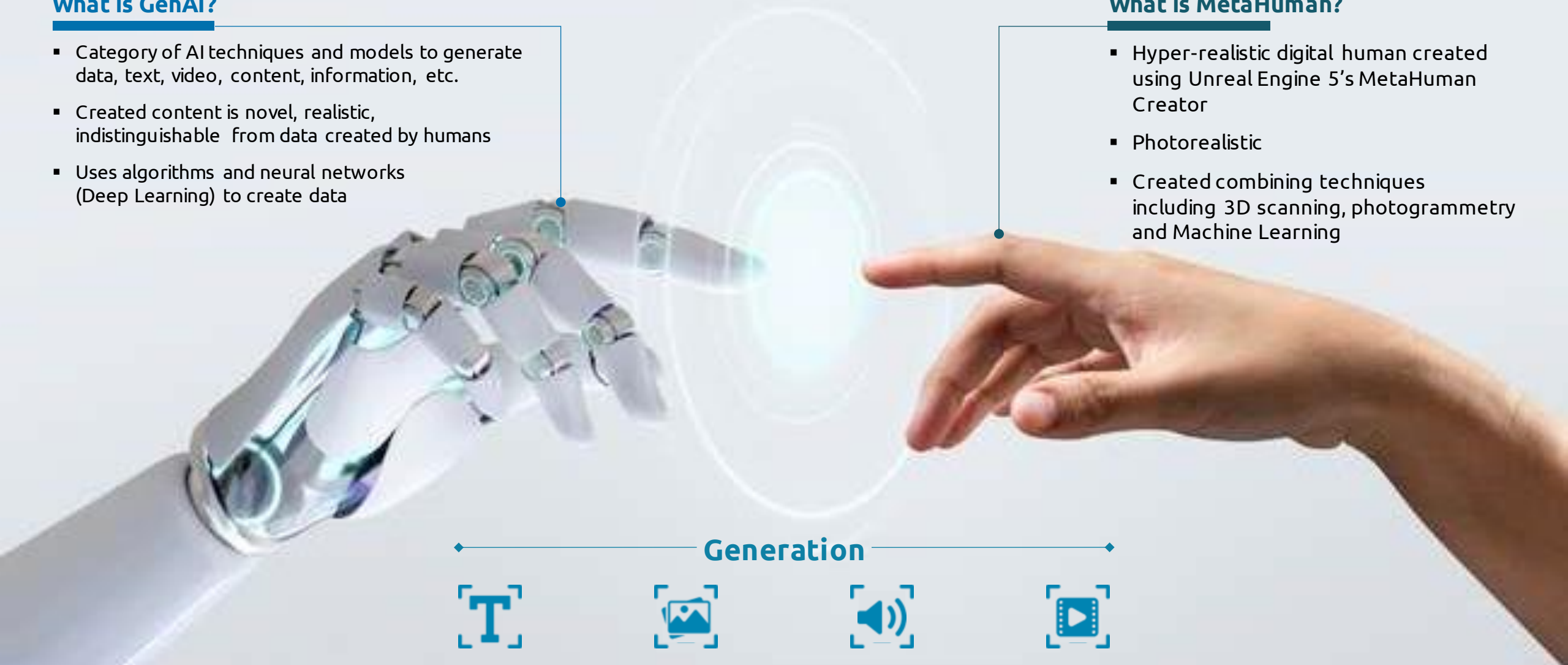


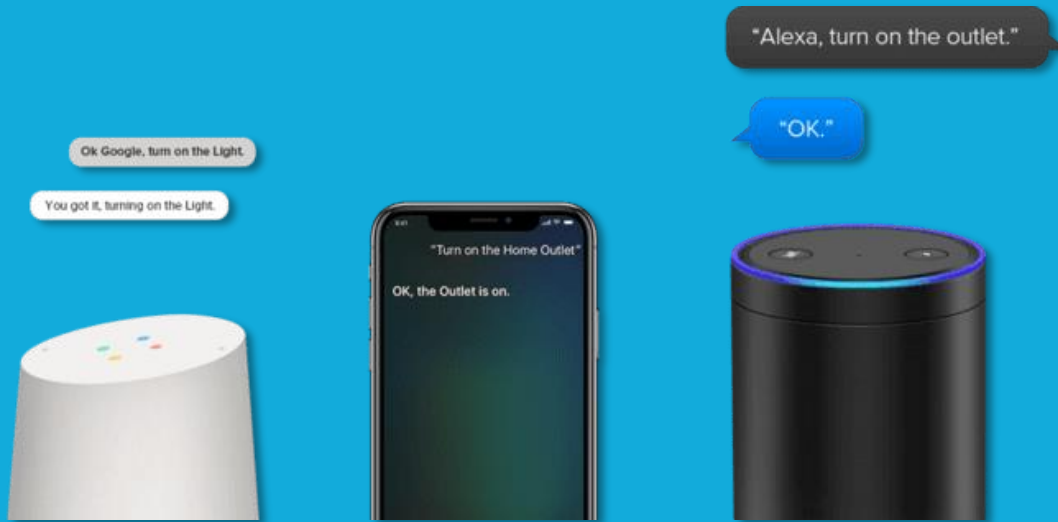
What is GenAI?

- Category of AI techniques and models to generate data, text, video, content, information, etc.
- Created content is novel, realistic, indistinguishable from data created by humans
- Uses algorithms and neural networks (Deep Learning) to create data

What is MetaHuman?

- Hyper-realistic digital human created using Unreal Engine 5's MetaHuman Creator
- Photorealistic
- Created combining techniques including 3D scanning, photogrammetry and Machine Learning





DIGITAL ASSISTANT

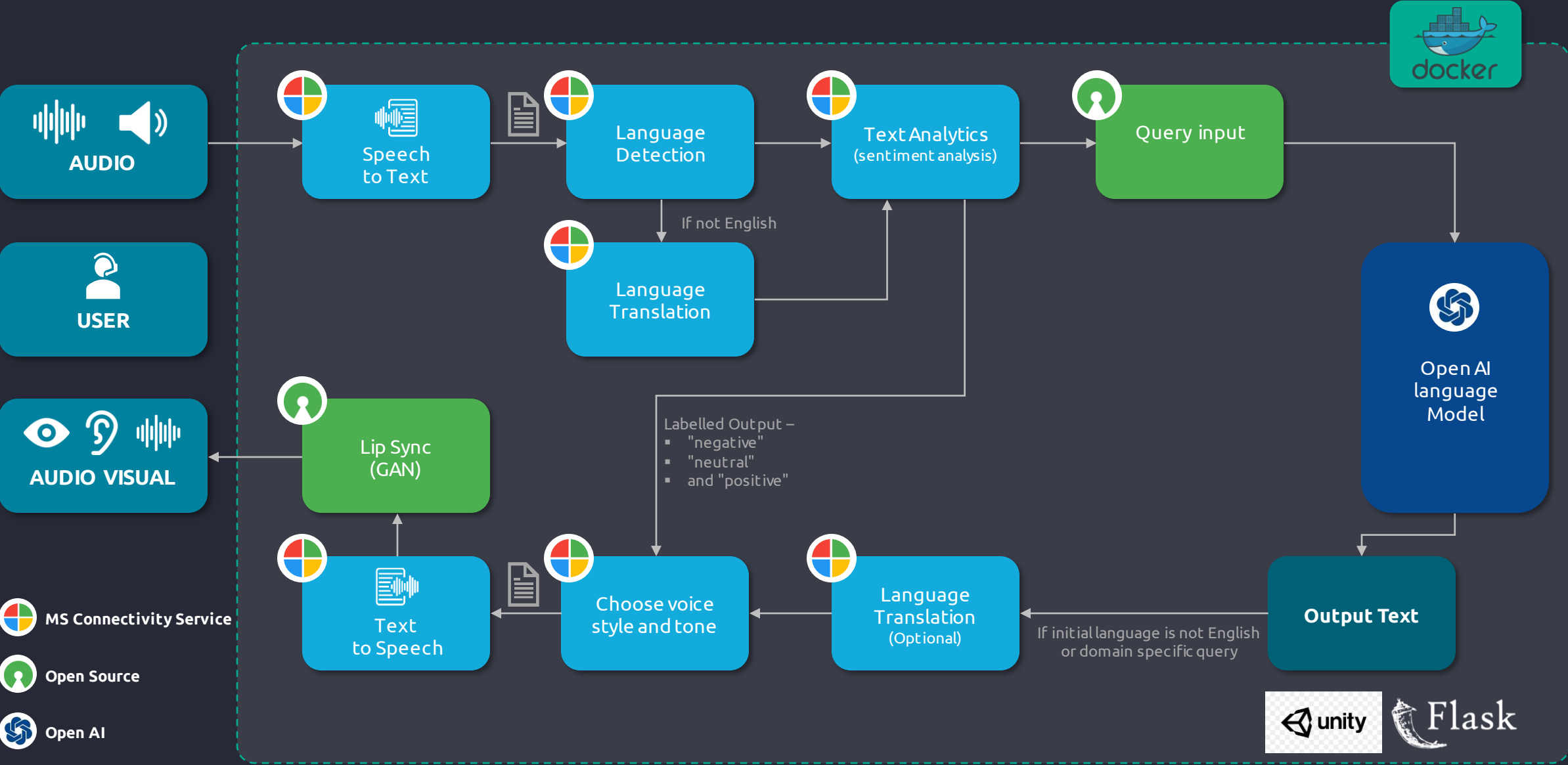
- Human avatar
- Understand spoken language
- Responds automatically
- Creates a human like conversation and discussion
- Trained with text from your organization

DIGITAL COWORKER



- Chat function based on Flowchart or Logic Schedule
- Answers 80% of the questions
- Knowledge graph created using AI from previous cases, rule documents etc. resulting in a clear process

PROCESS FLOW



UKHSA USE CASE – 1

– HEALTH ANALYSIS, DATA ANALYTICS AND RESPONSE



- Monitor global health data sources, news and reports to provide real-time updates on potential disease outbreaks or epidemics
- Helping in formulating response strategies, including resource allocation, travel advisories, and communication to the public
- Assist in analysing trends and patterns in public health data. Identify hotspots for diseases, track vaccination coverage, provide insights into health disparities and assisting the UKHSA in making informed policy decisions
- Provide personalised health advice and education to the public

UKHSA USE CASE – 2

– CONTENT CREATION AND TRANSLATION



- Generate informative and easy to understand health education materials including preventive measures, vaccination information, healthy lifestyle choices, and specific health conditions
- Assist in developing content for public health campaigns, posters, brochures, social media posts, etc.
- Help create blog posts and articles for the UKHSA website, covering topics related to public health, disease prevention, updates on health regulations and research findings
- Generate memos, reports and other internal documents including drafting training materials, policies and procedures
- Helps in translating the communication to serve non-English-speaking population

UKHSA USE CASE – 3

– DATA SCIENCE FOR GENOMICS



- Conduct literature reviews, helping to stay updated on the latest publications, studies and breakthroughs in the Genomics field
- Assist in / suggest data preprocessing tasks, such as data cleansing, normalisation, and feature engineering for genomic data
- Provide guidance on preparing data for downstream analysis, including variant calling, RNA-seq and microarray data
- DAISY can provide relevant algorithms and ML model architecture for ML in genomics

UKHSA USE CASE – 4

– ASSISTANCE IN BUILDING TECH STRATEGIES



- Provide insights into optimising IT infrastructure
- Analyse current infrastructure, assess future needs, and recommend hardware, software, and cloud solutions
- By staying updated on the latest cybersecurity threats and best practices, offer recommendations for improving security measures and assist in formulating robust cybersecurity strategy
- Provide guidance on data governance, data storage solutions, data analytics strategies
- Keep updated on changing regulations and ensure UKHSA technology strategies remain compliant



THANK YOU!

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