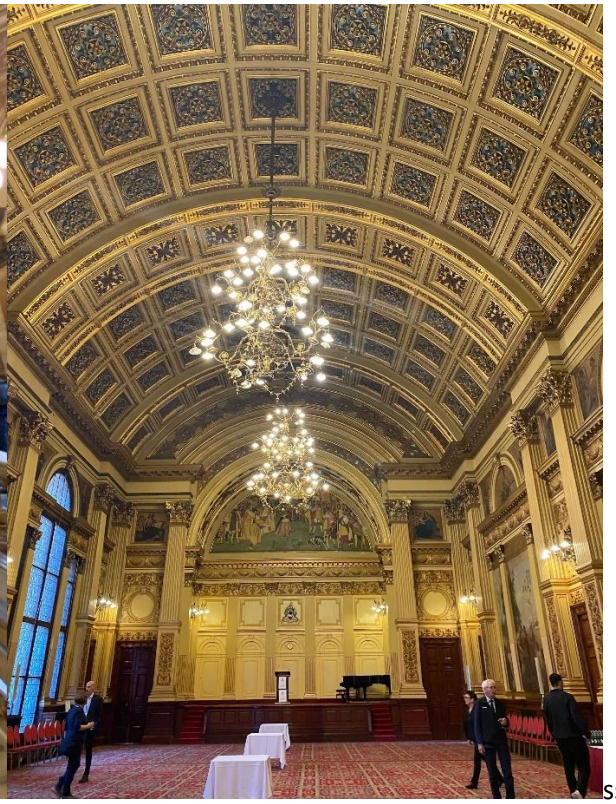
I first learned about the MIE 2025 through a kind physician who had been awarded the Julian Costanzo travel bursary. He encouraged me to apply for the bursary after I expressed my interest in contributing to digital health projects. Upon receiving the fellowship, I was determined to make the most of this opportunity by fully engaging in the conference, absorbing the insightful talks and discussions, and sharing valuable content with the BCS community and prospective fellows through this article.

The Medical Informatics Europe conference, co-hosted by EFMI and BCS, serves as a platform for clinicians, professionals, policymakers, and researchers to engage in dialogue and learn from each other to advance medical informatics. The faculty of health and care bursary I received is designed for professionals outside the primary care field to participate in these discussions, learn about the latest developments in medical informatics, and contribute to the future of digital health innovations. Through this event, I gained a comprehensive view of healthcare systems and identified trends in developing findable, accessible, interoperable, and usable data infrastructures. These infrastructures enable different standards and platforms to transform data into shared knowledge, deriving insights while maintaining privacy and security.

A conference tradition, the "transfer of baton," is derived from athletics. The event organizer opened the event with a Scottish proverb: “Today’s rain will be tomorrow’s whisky.” We face a formidable challenge in bridging the gap between data discovery and data implementation. We have a wealth of data awaiting conversion into computable knowledge. Data without governance and human oversight can introduce noise and biases, side-tracking us from our goals. High-quality data is essential to build strong infrastructure that can scale up our data implementation process to manage multiple tasks. Skilled individuals are needed to validate insights, understand context, and evaluate unmitigated data into FAIR (Findable, Accessible, Interoperable, and Reusable) digital objects, feeding into actionable digital infrastructure to draw meaningful conclusions and iteratively improve our discovery phase. My main learning from the broad idea is that interoperability is key to build a robust community. These cross-talking platform supports researchers, working professionals, and clinicians in creating synergy and combining practical insights and knowledge to learn from each other. Some of the other key insights I gathered from the keynote speeches include the medical informatics community's commitment to developing policies that bolster confidence in data models, safeguard patient privacy, mitigate cybersecurity risks, and establish responsible, efficient, and effective systems.

Exploring the vibrant city of Glasgow was a delightful experience. Unlike the meandering rural alleys of Oxford, Glasgow's streets are laid out in a grid pattern, providing a sense of order and openness that complements the city's gothic and refined architecture. Stunning wall murals adorn the buildings, showcasing beautiful wildlife, energetic slogans, and futuristic concepts. The bustling streets are alive with activity, lined with an array of pubs and shops inviting exploration.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In the heart of Glasgow, the town centre is home to the Glasgow Art Gallery, where the melodic tunes of pipers fill the air, adding cultural charm to the surroundings. A notable landmark is the Duke of Wellington statue, humorously adorned with a traffic cone as a hat—a quirky tradition embraced by Glaswegians since the 1960s. This playful gesture reflects the city's unique character and sense of humour. The pubs in Glasgow, much like those throughout the UK, exude a welcoming and laid-back atmosphere, where performers entertain patrons with music and instruments, creating a lively and enjoyable ambiance.


The conference focused on educating and training the next generation of physicians and telemedicine innovators. I learned about utilizing emerging technologies such as virtual reality (VR) systems for effective training for physicians and nurses. These technologies offer immersive learning experiences that simulate real-life medical scenarios, providing invaluable hands-on practice in a controlled environment. VR platforms allow practitioners to learn in low-stakes situations, preparing them to handle high-risk environments proficiently. Additionally, the conference highlighted the development of usability testing frameworks and evaluation templates, essential tools for assessing the effectiveness of training programs and ensuring they meet the diverse needs of medical practitioners. The creation of specialized training hubs, such as digital komptent and ERAMUS+, were discussed, emphasizing the importance of modularized content tailored to fit the specific training requirements of various stakeholders, including medical practitioners and the public. These learning hubs provide flexible learning opportunities for people with varying access to information to build skills and competency in utilizing technology.

In the realm of technology innovation, I was particularly interested in the intricacies of NLP technology to create semantic mapping through FHIR using an ETL pipelines. Interpreting medical records can be daunting, necessitating the development of tools that simplify technical burdens. Such tools should be user-friendly, enabling healthcare professionals to leverage advanced technologies without being bogged down by complexity. For instance, the EMR system utilizing the US core to improve the Japanese EMR system was explored, highlighting the challenges and opportunities in adapting international standards to local contexts. The GeMTeX project annotates the SNOMED-CT definition of diagnostic information and patient demographics into usable digital objects.

One of the conference topics that intrigued me was usability testing. Attending the conference and listening to the talks sparked my interest in identifying critical usability issues using various qualitative and quantitative methodologies. Human factor engineering and usability testing have become increasingly important in providing accessible and user-friendly features to target user groups. Learning about the toolkits to achieve these goals was particularly useful. After returning from the conference, I developed a usability evaluation for the UI software of my company's Orthopedic X-ray imaging product. The study involved using agile task analysis and observation to identify critical usability issues, employing

single ease questions (SEQ) to assess perceived task difficulty, and utilizing the NASA-TLX and system usability scale (SUS) to quantify workload and usability. Additionally, I explored underlying user concerns and preferences through semi-structured interviews with a few internal staff members. I also used personas and user stories to develop the product roadmap. These toolkits provided insights into user preferences, such as general impressions, efficiency, learnability, clinical relevance, ease of use, and comparisons to existing predicate devices, enabling me to contribute to developing a better product.

Another aspect of the conference that particularly interested me was creating a sustainable and systematic framework to support collaborative healthcare initiatives. For instance, there was a focus on risk management and the adoption of IDERHA to enhance interoperability across healthcare systems. The discussion on the European Health Data Space (EHDS), which uses blockchain technology to offer open access to individual patient records in EU regions, provided an overview of this imminent innovative tool that will be integrated into the European healthcare system. These discussions at the conference addressed not only technical concerns but also demonstrated how they operationally integrate with different healthcare platforms. I later researched these platforms and found that they are interconnected. For example, the IDERHA project has conducted a comprehensive review of the EHDS regulation and implemented strategies to align with incorporating the EHDS platform into the interoperable framework. I look forward to the open dialogue regarding these innovative technologies, which seem to be a breakthrough in democratizing healthcare and providing FAIR data to everyone.

DICOM data interoperability remains central to my job responsibilities, and after attending the conference, I gained a fresh perspective on DICOM standards, the innovative DICOMWeb, and how DICOM data connects with RIS and PACS. As a software test engineer specializing in test automation, I devised an automated Python framework that verifies DICOM data conformity against DICOM standards as it flows through the healthcare delivery enterprise system (HDES) using the DVTK toolkit. This ongoing project will allow for regular checks of the HDES systems and timely identification of any software issues. I am also seeking training in DICOMWeb and FHIR to improve interoperability in the medical imaging landscape.

Medical informatics is a vast field that encompasses various disciplines, including medical science, healthcare management, software development, data science, and project management. Academic research often ventures into areas that the industry may overlook, with standards and practices that are sometimes undocumented and uncontrolled. This lack of standardization can lead to gaps and inconsistencies. However, the fast-paced nature of the industry, which adheres to numerous standards, offers valuable lessons for academic training practices. By enhancing industry awareness of the new academic findings and integrating the industrial practice such as coding standards, project management documentation, and process knowledge into the academic research, we can drive technological advancements and improve healthcare outcomes. Achieving successful outcomes in this field requires expert knowledge and collaboration. As Dr. Lars Lindskold, EFMI president, stated in his closing remarks, "Human makes human human”; collaboration is key to making today’s increasingly diversified society whole and building strong digital infrastructure to enable scaled-up innovative throughput. This conference has instigated my interest in developing clinical imaging informatic solutions integrating DICOM and FHIR, designing FAIRer studies, and improving the interoperability of the software solutions. I would like to pass on the baton and invite next year’s prospective applicants to take advantage of this amazing opportunity to explore a new city, learn fascinating ideas about medical informatics, and connect with likeminded people.