

DAAD

“How I would like to continue my research ...”



The use of artificial intelligence in medicine has great potential.

The international networking event for postdocs predominantly took place online this year: a fascinating discussion on artificial intelligence (AI) in medicine

At the end of September 2021, young international researchers followed the virtual journey of Postdoc-Net-AI, during which they got to know ten German universities and research institutes, from Lübeck to Tübingen, that are using or researching artificial intelligence in medicine. In addition to these presentations, interested postdocs could also conduct individual meetings. “These meetings became a medium for matchmaking between suitable fellows and hosts,” explains Luca Wettlaufer, who is responsible for the Postdoc-Net-AI project at DAAD. “There were many interesting individuals among the doctoral students. This networking week could attract talented new AI researchers to Germany.”

Breaking down barriers

“This DAAD program is a good way to break down barriers a little further and to provide an easier entry point into Germany as a research location,” says Prof. Dr. Julia Schnabel, who presented both the Technical University of Munich and the Helmholtz Center Munich during the network week, and researches artificial intelligence in medical image processing. “Many participants already had experience with my research specialism, so it was my great pleasure to get to know young international researchers during this networking event.”

Prof. Schnabel, who previously had a professorship at King’s College London, sees great potential for AI in medicine: “The use of artificial intelligence could considerably improve

prediction and diagnostic processes. In medicine, there is a lot of heterogeneous patient data.
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including medical and family history. This is a huge mountain of data that we can only begin to understand better using AI. There are lots of possibilities for research in this area.” The young researchers who took part in the virtual tour will subsequently have the opportunity to make an individual trip to visit the institutes they find most interesting in person. Some have already been able to do so following the event. Four of the participants report what they learned from the virtual tours.



Jiancheng Yang is a scientific employee of the CVLab at the École polytechnique fédérale de Lausanne (EPFL) in Switzerland. In his research, Jiancheng, who studied machine learning in Shanghai, concentrates on medical image analysis and 3D computer vision with a clinical focus on lung cancer and thoracic disease.

“The Postdoc-Net-AI week was a great opportunity for me to officially learn more about AI research in Germany. I was already familiar with the many high-caliber research teams, but I never thought that I would meet them one day. As well as the friendly support by the DAAD team, this networking event gave me the opportunity to meet other young researchers with similar interests. I personally find it cool to understand the 3D world using computational methods, and to apply these technologies to solve specific challenges in medical scenarios. I want to develop quantitative tools to simplify precision medicine and healthcare provision. I have recently started working on geometric deep learning in medical imaging.”



Adèle Ribeiro works as a postdoc researcher at the Causal AI Laboratory of the Data Science Institute of Columbia University in New York. Her research combines information technology, statistics and artificial intelligence in healthcare.

“A great aspect of research in Germany that came to my attention is the fact that the projects are all very interdisciplinary and collaborative in nature, and involve researchers and specialists from universities, hospitals, external research institutes and companies. This is of

fundamental importance to promoting innovation and the development of top-level
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...fundamental importance to promoting innovation and the development of top-level research. With this in mind, I found the AI research consortium Cyber Valley very impressive – with its partners from several universities, research institutes and industry, including the University of Tübingen, the Max Planck Institute for Intelligent Systems, Bosch and Amazon. Overall, I was very pleased to learn about such a wide variety of topics to do with AI in medicine in just one week, ranging from diagnosis of disease to surgical robotics.”



Oluwafemi Sarumi is a lecturer and researcher at the Faculty for Computer Science at the Federal University of Technology Akure (FUTA) in Nigeria. He specializes in data science, deep learning and machine learning for medical diagnostics.

“My passion for AI research springs from the possibility of simplifying complex tasks, reducing dependency on human labor and discovering new methods of problem-solving. The virtual networking week gave me the amazing opportunity to gain insights into the German AI landscape, make contact with top German professors and learn more about AI at German universities, where I would like to continue my AI research as a postdoc – such as exploring how AI can be used in medical imaging. I would like to learn more about German AI research and discuss the latest AI research trends with German researchers to find opportunities for cooperation and partnership in academia and industry.”



Vlada Rozova is a research fellow in applied AI in medicine at the Royal Melbourne Institute of Technology (RMIT University). She studied applied mathematics and information technology in Moscow, and mathematical biology in Sydney.

“My goal is to better understand diseases like cancer through AI. In my doctoral thesis, I applied machine learning to clinical and microscopic images to gain insights in the process of tumor growth and metastasis. I think that early diagnosis and accurate prediction of the progression of the disease are the key to selecting the right therapy and improving the chances of healing for patients. Artificial intelligence opens up a whole lot of new opportunities in this area. The virtual tour of the DAAD gave me in-depth insights into AI. Updated 2021-10-29 Now I would like to continue my research ...” - DAAD - Deutscher Akademischer Austauschdienst

opportunities in this area. The virtual tour of the DZHS gave me an deeper insights into the research in Germany, and perhaps I can take the next step in my career there. I would like to progress in this field, so that AI can be integrated more extensively in everyday clinical practice. There is still a lot of work to be done to persuade medical professionals that AI can be of great assistance to them in their daily work.”

Klaus Rathje (October 29, 2021)