



Press Release

Degree program combines radiation sciences with artificial intelligence

New master's profile in Germany: Tübingen's Faculty of Medicine also trains students in artificial intelligence methods

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Starting in the winter semester 2022/23, the University of Tübingen will offer Germany's first profile area "Artificial Intelligence in Medical Radiation Sciences". In the master's program "Medical Radiation Sciences", students will be trained both in specialized areas of medical radiation sciences and in artificial intelligence (AI) methods.

The course content includes research areas in radiation therapy, non-invasive imaging and tumor and radiation biology as well as machine learning, computer vision, basics for a better understanding, analysis and visualization of scientific data.

AI methods are already being used in cancer treatment, including for the evaluation of complex data or in therapy decisions. The knowledge acquired in the master's profile can be used, for example, to optimize imaging for radiation planning, to contour organs and tumors using deep learning methods, or to better control radiation treatments. Graduates will also be able to contribute to the further development of individualized diagnostic and therapeutic procedures through AI in the future, both in research and in industry.

Researchers from the Faculty of Medicine and the Faculty of Mathematics and Natural Sciences at the University of Tübingen and the University Hospital Tübingen as well as from Cyber Valley will teach in this profile area. Cyber Valley is Europe's largest research consortium in the field of AI and it connects partners from politics, science, industry and society. This ecosystem in southwestern Germany is continuously growing with additional multidisciplinary initiatives, making the Stuttgart-Tübingen region a hotspot for research and innovation in the fields of machine learning, robotics and computer vision.

In addition, the master's profile is part of the AI in medicine initiative, in which the University of Tübingen, the Faculty of Medicine and the Max

Planck Institutes, together with other numerous Cyber Valley partners, are advancing the use of AI in medicine and the life sciences.

Further information on the study program: <https://www.medizin.uni-tuebingen.de/de/medizinische-fakultaet/studium-und-lehre/studiengaenge/medizintechnik>

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