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Digital help for dementia: IU Diversity Award honours bachelor thesis in UX design

Matthia Leyendecker wins the IU Diversity Award for her innovative prototype that independently activates the memory of dementia patients

Curing dementia is almost impossible. Those affected, relatives and caretakers are exposed to an enormous burden. Matthia Leyendecker has developed a novel approach that can give dementia sufferers more independence and relieve the burden on caretakers in her bachelor's thesis at IU International University of Applied Sciences (IU). The 28-year-old from Coburg was honoured with the IU Diversity Award 2023 for her innovative solutions. Within eight weeks, the IU student on the User Experience Design (UX Design) programme developed a prototype that enables those affected to independently stimulate their cognitive performance by playfully exploring different media formats.

Flexible adaptation to the needs, life stories and mental states of dementia patients

Specifically, the prototype developed plays audio, video and photo formats. For example, those affected can call up personal pictures from their early youth or from their current family circle, listen to audio formats such as pieces of music or voice messages from grandchildren and watch documentary films about their own homeland or videos from the last summer party at the nursing home. The variety of available media is very flexible and can be customised to the needs, life stories and mental states of dementia sufferers. Those affected are playfully empowered to select and play media themselves. The aim is to arouse positive emotions and strengthen the memory and identity of those affected. Self-determined exploration can also promote dialogue processes and facilitate exchanges with caretakers and relatives. The prototype developed is to be used in nursing homes – in particular to improve psychological and social support services and strengthen active participation in the lives of dementia sufferers.

"This outstanding bachelor's thesis combines UX design with the diversity dimensions of "age" and "impairment" in a unique way. The thesis shows how versatile and relevant the UX Design degree programme is and how it can contribute to improving the lives of people in a wide variety of life situations. We were deeply impressed by Matthias' close connection to the field and her innovative spirit," says Nicola Schmidt-Geheb, Equality and Diversity Officer at IU.

Her grandpa with dementia was her greatest inspiration

Matthia Leyendecker's motivation was a very personal one, as she herself reveals: "It took several weeks to find a topic for my bachelor's thesis. I wanted to do something meaningful, a tangible result was important to me. My grandad gave me the inspiration for it. We bought him a tablet and a senior mobile phone so that he could participate even more in family life. I was responsible for setting up the messaging services and the technical issues. I wrote operating instructions for him and realised how inaccessible mobile phones and tablets are for senior citizens. This gave rise to the idea of simplifying the whole thing technologically for the first time. When my grandad eventually developed dementia, it became increasingly difficult for him to use the technical devices. I then went in search of alternatives, but was

unsuccessful. So, I came up with the idea of developing something for dementia sufferers myself, to give them something they could play with to activate their memory. It was also important to me to create something that people could use independently, i.e. without someone sitting next to them and having to guide them."

From carpentry intern to UX designer

Matthia Leyendecker's extraordinary educational path took her from a carpentry internship to a bachelor's degree in wood engineering to a master's degree in future design. At the same time, she began her distance learning programme in UX Design at IU, demonstrating her enormous versatility and commitment to innovative solutions. The award winner does not rule out the possibility of further developing her prototype and has already submitted several scientific papers to various conferences. In the meantime, she has accepted a job offer as a user researcher. "For now, I've studied enough, although I've always enjoyed studying. The IU degree programme particularly inspired me because of the practical work in the Creative Labs. There we had the opportunity to apply design techniques and theoretical knowledge in a three-month project and, for example, to carry out usability tests with real users. This phase was incredibly valuable for me, as it allows you to build up your own personal portfolio. Now I'm looking forward to applying the knowledge I've learnt and the skills I've acquired in the UX field in practice," says Matthia.

About the IU Diversity Award

IU International University of Applied Sciences, Germany's largest university of applied sciences, has presented the IU Diversity Award twice a year since 2018. The jury consists of a ten-member team of employees from teaching, the examination office, equal opportunities office and other departments. IU students from Germany and abroad have the opportunity to submit their bachelor's or master's thesis. The IU Diversity Award is intended to contribute to raising public awareness of the research field of diversity and is endowed with a prize of 500 euros.

URL zur Pressemitteilung: <https://www.iu.de/en/university/diversity/>

URL zur Pressemitteilung: <https://www.iu.de/en/bachelor/ux-design-user-experience-design/>



Matthia Leyendecker, IU graduate on the UX Design programme and winner of the IU Diversity Award 2023



Nicola Schmidt-Geheb, Equality and Diversity Officer at IU International University of Applied Sciences