

Student Assistant - Visualization for the Project "Digitalization in Teaching"

Student Assistant Research

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Context & Goal

The last few decades have been known for rapid growth, connection, and communication, especially in relation to digitalization. In many working areas, it is becoming more and more important to use digital technologies and in most cases the usage of analogue tools has switched to the utilization of digital methods [1]. Due to the importance of working with digital content and digital technologies, students of all ages should learn how to use basic digitalization tools and how to discuss digital contents in their working lives [2]. Especially the last few years have shown, that not only the usage of digital applications play a role in today's learning environment. It becomes even more important for students to understand, that digital tools are deeply connected to nearly every subject area (e.g., when it comes to the usage of artificial intelligence in topics like medicine and law). At the university level, there are already corresponding courses on digitalization topics - but they are scattered throughout the university and are not visible to every student. To make it easier for students to find courses related to digitalization, we want to bundle these distributed offerings and make them transparently available by creating a Web Application [3].

To build this application, we have already curated a database which contains all the module descriptions of TUM. Overall, we want to make the search process for digital lectures for students as easy and accessible as possible. For this, we want your help in structuring and displaying the data for students. Your task will be to work with us and design and develop a suitable web interface to recommend courses to interested students.

Required Skills

- Prior experience in web development on the front end as well as on the backend
- Strong knowledge of HTML, CSS, JavaScript, and at least one back-end programming language such as PHP, Python, or Ruby
- Experience with version control systems such as Git
- Excellent problem-solving skills and attention to detail
- Strong communication and collaboration skills

Our Offer

We can offer a HiWi contract of up to 20hrs per week. You are embedded into a project focused solely on this subject and work with an interdisciplinary working group. Additionally, we can offer you a fixed working space in our lab at the TUM campus in Garching.

References

- [1] A.-M. Cazan, "The digitization of working life: Challenges and opportunities," *Psihologia Resurseilor Umane*, vol. 18, no. 1, pp. 3–6, May 19, 2020, ISSN: 2392-8077, 1583-7327. DOI: 10.24837/pru.v18i1.457. [Online]. Available: <https://www.hrp-journal.com/index.php/pru/article/view/457> (visited on 02/15/2023).
- [2] Y. Zhao, A. M. Pinto Llorente, and M. C. Sánchez Gómez, "Digital competence in higher education research: A systematic literature review," *Computers & Education*, vol. 168, p. 104212, Jul. 2021, ISSN: 03601315. DOI: 10.1016/j.compedu.2021.104212. [Online]. Available: <https://linkinghub.elsevier.com/retrieve/pii/S0360131521000890> (visited on 02/15/2023).
- [3] N. Seidel and C. M. Rieger, "Semantic Textual Similarity von textuellen Lernmaterialien," 2019, ISBN: 9783885796916 Publisher: Gesellschaft für Informatik e.V., ISSN: 1617-5468. DOI: 10.18420/DELFI2019_360. [Online]. Available: <http://dl.gi.de/handle/20.500.12116/24417> (visited on 02/01/2023).