HAI DANG

Doctoral HCI Researcher (2nd Year)
Based in Munich, Germany
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I'm a Ph.D. student in the **HCI+AI** research group at the University of Bayreuth with strong **quantitative research skills** and a record of publications at top-tier peer reviewed conferences. I design **interactive co-creative systems** to enable users to create more expressive digital content and conduct **user studies** to understand pitfalls in the process of humans interacting with imperfect AIs.

EDUCATION

since 2020 **Ph.D. in Human Computer Interaction** University of Bayreuth, Germany
Research: Interactive co-creative systems, Human AI collaboration
Advisor: Daniel Buschek

2018-2020 **Master of Science in Computer Science** University of Munich, Germany
Coursework: Machine Learning, Probability Theory, Statistics, High Performance Computing, Big Data Management, Knowledge Discovery in Databases

2013-2018 **Bachelor of Science in Media Informatics** University of Munich, Germany
Coursework: Algorithms, Data Structures, Human Computer Interaction, Media Technology, Information Visualization, Calculus, Linear Algebra, Computer Graphics

SELECTED PROFESSIONAL EXPERIENCE

since 2020 **Research Assistant**, University of Bayreuth
-[P.1] Built tool for interacting with geneartive models for images (To appear in CHI'22)
-[P.2] Developed a visual analytics tool for motion sensor data. (Published in CHI'21)
Technology: Python, ReactJS, Pandas, PyTorch, Docker

2019-2019 **Machine Learning Developer**, SWM, Munich
Developed an autoregressive model to predict the energy consumption in Germany.
Presented results to the analytics team and created a report for the head of analytics.
Technology: Python, Pandas, PyTorch, Docker

2017-2019 **Software Developer**, Celonis, Munich
Developed Python Data Push API for the Celonis Business Intelligence Cloud Platform.
Deployed the API for production
Technology: Python, Javascript

VOLUNTEERING

since 2021 **Education Team Lead**, TUM.ai
Leading the TUM.ai AI School initiative to teach foundational AI knowledge to students from all backgrounds.

since 2021 **Web Chair - IUI 2022**, ACM, Association for Computing Machinery
Organise and maintain the official webpage for the upcoming IUI'22 conference.

SKILLS

User Research:	Online User Studies, Computational Analysis Methods Expert Interviews, Think-Aloud-Protocol, Statistical Analysis
Programming Languages:	Python, JavaScript
Frameworks and DevOps:	PyTorch, ReactJS, Pandas, Scikit-Learn, Docker, Git

TEACHING ASSISTANT

2021 **Creating Intelligent Interactive Systems**, University of Bayreuth
Introduction to Machine Learning on Mobile devices
Undergraduate/Graduate level course, with 37 students (Instructor: Daniel Buschek)

2020 **Intelligent User Interfaces**, University of Bayreuth
Introduction to Web Applications using SvelteJS
Undergraduate level course, with 59 students (Instructor: Daniel Buschek)

Creating Intelligent Interactive Systems, University of Bayreuth
Introduction to Machine Learning on Mobile devices
Undergraduate/Graduate level course, with 21 students (Instructor: Daniel Buschek)

2016 **Programming Multi Media Applications**, University of Munich
Introduction to Python Development for Games.
Undergraduate level course, with 116 students (Instructor: Prof. Heinrich Hussmann)

PEER-REVIEWED CONFERENCE AND WORKSHOP PUBLICATIONS

2022 P.1 **Hai Dang**, Lukas Mecke, Daniel Buschek. 2022. **GANSlider: How Users Control Generative Models for Images using Multiple Sliders with and without Feedforward Information.** (*to appear CHI '22*). Association for Computing Machinery, New York, NY, USA.

2021 P.2 **Hai Dang** and Daniel Buschek. 2021. GestureMap: Supporting Visual Analytics and Quantitative Analysis of Motion Elicitation Data by Learning 2D Embeddings. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (*CHI '21*). Association for Computing Machinery, New York, NY, USA, Article 317, 1–12.

P.3 Daniel Buschek, Lukas Mecke, Florian Lehmann, **Hai Dang** 2021. Nine Potential Pitfalls when Designing Human-AI Co-Creative Systems. In *HAI-GEN Workshop at IUI'21* (*IUI'21*). In Proceedings of the ACM IUI 2021 Workshops, April 13-17, 2021.

SELECTED PROJECTS

2021 **Search Engine for digitalized Floor Plans 48h TUM.ai Makeathon**,
- Lead development of an interactive search engine for digitalized floor plans.
- Created a dataset with hand-drawn floor plan shapes.
- Embedded floor plans using a convolutional Autoencoder and performed Nearest-Neighbor search.

2020 **Evaluation of Consumer Grade BCI Devices - Seminar: Group Project**,
- Applied basic signal processing techniques on the raw EEG recordings to extract alpha and theta frequencies that characterize the cognitive workload.
- Trained multiple classifiers from the SciKit library to differentiate between various workload levels.

2019 **Development of an Interactive Sleep Monitoring Device**, Seminar: Group Project
- Built the analytics backend to collect and analyze sleep data.
- Designed the communication protocol between the device and the analytics backend.

2019 **Power Efficient High Performance Computing - Seminar: Group Project**,
- Developed a recurrent neural network model for the prediction of energy consumption.
- Achievement: Won the class competition for most accurate predictions by employing an autoregressive recurrent neural network.