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 upcomming 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

- 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 work-load 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.