Jan Küster | M.Sc.

Research Software Engineer

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I am a Digital Media graduate with 10+ years of experience as research software engineer. My main focus is on production-grade web applications, involving real world users for long-term evaluations in the field. For this I leverage primarily web standards, as well as available modern web-technologies.

PUBLICATIONS

Belli, A., Küster, J., Matayeva, L., Hohmann, F., Sinner, P., Krüger, G., Wolf, K., & Hepp, A. (2025). OpenQDA (1.0.0). Zenodo.
https://doi.org/10.5281/zenodo.14772936

Küster, J. (2024, March 6). Software Applications for Individuals with Low Literacy - Key Insights and Takeaways in Research Software Engineering from an Interdisciplinary Project. 4th conference for Research Software Engineering in Germany (deRSE24), Julius-Maximilians-Universität Würzburg. Zenodo.
https://doi.org/10.5281/zenodo.10810074

Küster, J., Meyer, I. A. M., Windler, M., Karsten D. Wolf, & Koppel, I. (2023). leaonline/leaonline-app: 1.1.0 (v1.1.0). Zenodo.
https://doi.org/10.5281/zenodo.10816689

RELEVANT REPOSITORIES

OpenQDA - https://github.com/openqda
lea.Online - https://github.com/leaonline
Node OAuth - https://github.com/node-oauth

RESEARCH PROJECTS

OpenQDA - A Free Sustainable Qualitative Research Software
ZeMKI, University of Bremen | 2023 - Today

Goal: Develop a free and alternative to commercial QDA software

Key responsibilities: System architecture, software design, (web-) client architecture and dependencies management.

Major activity: Frontend implementation of rich interactive UI for qualitative data analysis using Vue3, Vite and TailwindCss.

Secondary activities: Managing Github repositories, documentation, CI, code quality assurance.

Available via https://openqda.org

IMPACT
University of Bremen | 2023 - 2025

Goal: Implement AI-based services as key tools in formative and summative assessment activities at the University of Bremen

Key responsibilities: System architecture, software design, infrastructure, legal implications, GDPR, ethical considerations, requirements engineering

Major activities: Requirements engineering and consulting

Secondary activities: AI tool development using Python and respective libraries

lea.online

University of Bremen | 2019 - 2023

Goals: Develop a multi-application system to allow diagnostics and learning of adults with low literacy

Key responsibilities: System architecture, software design, infrastructure, legal implications, GDPR, ethical considerations, outsourcing development, requirements engineering

Major activities: web-app development, mobile app development (react native + expo)

Secondary activities: GitHub repository management and maintenance

Publications:

Meyer, I. A. M., Wolf, K. D., Windler, M., & Küster, J. (2024). Digitale berufsfeldbezogene Förderung von Literalität und Numeralität in der arbeitsorientierten Grundbildung mit der lea.App. In K.-H. Gerholz, S. Annen, R. Braches-Chyrek, J. Hufnagl, & A. Wagner (Eds.), bwp@ Spezial HT2023 Fachkräftesicherung – Zukunftsweisende Qualifierziung, gesellschaftliche Teilhabe und Integration durch berufliche Bildung.
https://www.bwpat.de/ausgabe/spezial-ht2023/meyer-etal

CARO - Care Reflexion Online

University of Bremen | 2016 - 2019

Goals: Develop and evaluate a interactionistic classroom management system for German nursing education using MeteorJS.

Key responsibilities: System architecture, software Design, (web-) client architecture and dependencies management.

Major activity: Fullstack implementation of entire software

Secondary activities: Managing Github repositories, documentation, CI, code quality assurance.

Publications:

Darmann-Finck, I., Wolf, K. D., Schepers, C., & Küster, J. (2021). Digital unterstütztes Lernen in der Pflegeausbildung: Die Care Reflection Online (CARO) – Lernumgebung. MedienPädagogik: Zeitschrift Für Theorie Und Praxis Der Medienbildung, 317–345.
https://doi.org/10.21240/mpaed/jb16/2021.04.30.X

Schepers, C., & Küster, J. (2020). Sind Pflegeschulen bereit für den Einsatz digitaler Lehr-Lernformate? Berufsbildung, 181.
https://www.zeitschrift-berufsbildung.de/archiv/74-care-work-4-0

Project blog: https://blogs.uni-bremen.de/caroprojekt/ (German)

DomPL-IK
University of Bremen, part time | 2012 - 2014

Invented a flexible assessment framework, targeting industrial trainees

Supervised software development lifecycle, Recruited team members

Publications:

Seifried,J., Rausch,A., Kögler,K., Brandt,S., Eigenmann,R., Schley,T., Siegfried,C., Egloffstein, M., Küster,J., Wuttke,E., Sembill,D., Martens,T., Wolf,K.D. (2016). Problemlösekompetenz angehender Industriekaufleute – Konzeption des Messinstruments und ausgewählte empirische Befunde (DomPL-IK). In K. Beck/M. Landenberger/F. Oser (Hrsg.): Technologiebasierte Kompetenzmessung in der beruflichen Bildung – Ergebnisse aus der BMBF-Förderinitiative ASCOT. Bielefeld:WBV, 119-138

Project Management Simulation Training
Getoq Consulting | 2011 / 11

Performed a two-day project simulation from management perspective

Topics included customer contracts, change management, controlling, operational tasks

Student Assistant / Programmer
University of Bremen | 2010 - 2011

Realized an online diagnosis platform for workforce literacy development (Flex)

Modeled software design, implemented various prototypes, conducted usability tests

Publications:

Koppel, I., Küster, J., & Wolf, K. D. (2013). Usability testing with female functional illiterates,Usability-testing mit funktionalen analphabetinnen. Lecture Notes in Informatics (LNI), DEFLI Proceedings - Series of the Gesellschaft Für Informatik (GI), P-218, 293–296.

EDUCATION

Graduated as M.Sc. Digital Media
University of Bremen | 2015 / 07

Master Thesis: Semi Automated Scoring in Technology Based Assessment

Developed and evaluated an algorithm for semi automated scoring of spreadsheet data

Master Project - PrIMA
University of Bremen | 2012 - 2013

Co-Invented a touch table application for medical support, co-developed software (Java)

Formed a scrum team, mainted project dev server (Debian), surveyed target audience

Master Studies Digital Media
University of Bremen | 2012 - 2015

Inter-cultural classes in English, covering special topics in computer science and design

Professionalized in research methods, software development and e-assessment

Semester Abroad
University of Melbourne | 2009 - 2010

Mastered six months of study and trans-cultural experience in Melbourne, Australia

Finished machine programming, information visualization, professional essay writing

Bachelor Studies Digital Media
University of Bremen | 2007 - 2011

Foundations of Digial Media, Computer Science and Software Engineering