

Postdoctoral Researcher, Faculty of Information Technology  
University of Jyväskylä, Finland  
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[github.com/joetm](https://github.com/joetm)

## Education

Oct 2021, **Doctor of Science (Tech.)**, Computer Science (distinction) *University of Oulu, Finland*  
Nov 2015, **Master of Science**, Computer Science (distinction) *University of Southampton, United Kingdom*  
Aug. 2005 – July, 2006, **Erasmus exchange** *Linköping University, Sweden*  
Mar 2011, **Diplom-Wirtschaftsingenieur**, Industrial Engineering *TU Darmstadt, Germany*

## Research and Teaching Experience

Feb 2022 – today, **Postdoctoral Researcher** *University of Jyväskylä, Finland*  
Prompt engineering for text-to-image generation  
Apr 2021 – Aug 2021, **Senior Researcher/PostDoc** *FIZ Karlsruhe & Karlsruhe Institute of Technology, Germany*  
Ontology engineer in NFDI initiative: Design, implement, and manage the NFDI4Culture knowledge graph  
May 2018 – Apr 2021, **Doctoral Researcher** *Center for Ubiquitous Computing, University of Oulu, Finland*  
– Investigated creative work on non-creative crowdsourcing platforms with a value-sensitive approach  
– Designed, implemented, and evaluated crowd feedback systems and creativity support tools  
– Teaching Human-Computer Interaction ( $\approx 150$  students) and Social Computing (20 – 65 students)  
Aug 2016 – Apr 2018, **Researcher** *Human-Centered Computing, Freie Universität Berlin, and Cluster of Excellence “Image Knowledge Gestaltung” (Aug 2016 – Mar 2017), Berlin, Germany*  
– Designed and developed socio-technical systems and crowdsourcing work flows for facilitating knowledge transfer  
– Supervision of bachelor and master students

## Work Experience in Industry

May 2016 – July 2016, **Web Developer** (Full-Stack) *Liip AG, Bern, Switzerland*  
Full-stack development of web applications in an agile Scrum team  
Oct 2015 – Apr 2016, **Developer** (Full-Stack) *Seme4 Ltd., Southampton, United Kingdom*  
Developed [SkillsPlanner.net](https://skillsplanner.net) linked data platform and tools  
Aug 2013 – July 2014, **Business Analyst** *Alstom IS&T, Paris, France*  
Maintained IT service catalogue, designed user-facing IT services, conducted price analysis  
June 2011 – Mar 2012, **Strategy Analyst Trainee** *Alstom Power, Baden, Switzerland*  
Ad-hoc support for strategic management  
Aug 2008 – Jan 2013, **Full-Stack Web Developer** (Freelance) *Darmstadt, Germany*  
Conceived, built, and maintained several web applications, including an online community with over 228,000 members)

## Scholarships and Grants

Nokia Foundation Scholarship (2019 and 2020), Wihuri Foundation Grant (2020), Takasen Foundation Scholarship (2020), Finnish Foundation for Technology Grant (2020), Tauno Tönniö Foundation Grant (2020), University of Oulu UniOGS grants (2019 and 2020), ACM SIGCHI travel grant (2019), Erasmus Sokrates Scholarship (2005)

## Certifications and Licenses

Design Thinking (2021), Scrum Product Owner (2020), Scrum Master (2014), PMI-certified Associate in Project Management (2014), ITIL v3 Foundation (2014), Certificate in Business Analysis (2013), Quality Manager (2013), Zend Certified Engineer PHP 5 (2010), Business English Certificate Higher (2009)

## Skills and Experience

**Research skills:** Web-based prototypes, qualitative and quantitative research, user experience research, experiment design.  
**Technical skills:** Languages: Python, JavaScript, R, PHP. Machine Learning: Pandas, PyTorch, Jupyter, Huggingface Transformers, spaCy, Scikit-learn, seaborn, XGBoost, SHAP. Web development: React, Svelte, Vue.js, Astro, Node.js, REST, OpenAPI/Swagger, CKAN, D3, Networkx, Wordpress, Elasticsearch, Django, Flask, HTML, JSON, CSS, Sass. NLP: nltk, spaCy, LDA topic modelling. Cloud: AWS, Amazon S3, Google Colab. Google Cloud. Mobile development: Apache Cordova, Capacitor, Monaca, Expo, ReactNative. Databases: MySQL, GraphQL, PostgreSQL, MongoDB, Elasticsearch, Redis. Virtualisation: Docker, Vagrant, Ansible. Testing & tools: Git, GitHub, Webpack, yarn, npm, Fabric, Puppeteer, svm. Crowdsourcing: Amazon Mechanical Turk, Prolific. Office: Microsoft Excel, Word, L<sup>A</sup>T<sub>E</sub>X, Google Docs, Visual Basic (VBA). Semantic Web: RDF, OWL, SKOS, SPARQL, triple stores, JSON-LD, knowledge graphs, Protégé.

## Languages

German (Mother tongue)

English (TOEFL 114/120, IELTS 8, BEC Higher)

French (4 years, uncertified)

## Publications

30+ publications, including 4 journal articles and 9 full conference papers, with 30+ co-authors

[Google Scholar profile](#)

## Selected projects, software, and computational artefacts

Artworks created with text-guided image generation (since 2021)

[jonaso.de/artworks](https://jonaso.de/artworks)



### Selected research projects



*Prompt engineering for text-to-image generation* (2021 – 2022)

Prompt engineering is the practice of formulating effective input prompts for artificial intelligence. This project investigates prompt engineering in the context of AI-generated art.



*Crowdsourcing creative work* (2018 – 2021)

This doctoral research project investigated how creative work is experienced by workers and requesters on non-creative crowdsourcing platforms.



*CrowdUI crowd feedback system to support web design* (2020) – [www.crowdui.com](https://www.crowdui.com)

CrowdUI is a system for co-designing webpage with the website users. Website visitors can manipulate the elements of the webpage and peer-evaluating the user-created layouts.



*DUPLEX situated feedback system* (2019) – [github.com/joetm/perdis-client](https://github.com/joetm/perdis-client)

A concept for a public display installation that allows artists to collect feedback from a situated crowd. One digital artwork is shown on the main screen while feedback is entered on a touchscreen.



*IKON – Knowledge transfer in research museums* (2016 – 2018)

An information architecture and visualisation on a public display for facilitating knowledge transfer among the researchers at the Museum for Natural History in Berlin.

### Selected software and web projects



*sameAs-Lite* (2016) – [github.com/sem4/sameAs-Lite](https://github.com/sem4/sameAs-Lite)

A co-reference resolution service offered as open source and implemented with object-oriented PHP.



*SBB Pilot Open Data Platform Public Transport Switzerland* (2016) – [opentransportdata.swiss](https://opentransportdata.swiss)

An open data store for transport in Switzerland. Work included developing extensions for the CKAN storage.



*Eurapco Trend Monitoring Platform* (2016) – [www.eurapco-trends.com](https://www.eurapco-trends.com)

Development of a web platform for graphically monitoring trends, implemented with Python (Django) and JavaScript (Vue.js).



*GFBio Terminology Service website* (2016) – [terminologies.gfbio.org](https://terminologies.gfbio.org)

Design of the web presence of the GFBio Terminology Service.



*SkillsPlanner Linked Data Platform* (2015 – 2016) – [www.skillsplanner.net](https://www.skillsplanner.net)

Development of the backend and frontend of the Skillsplanner linked data platform, including data conversion tools and software documentation.

### Online portfolios

Research projects: [jonaso.de/projects](https://jonaso.de/projects)

Artworks: [jonaso.de/artworks](https://jonaso.de/artworks)

Web development: [jonaso.de/portfolio](https://jonaso.de/portfolio)