JONAS OPPENLAENDER

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Postdoctoral Researcher, Faculty of Information Technology jonas.x1.oppenlander@jyu.fi University of Jyväskylä, Finland www.jonaso.de 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, UK 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 Karlsruhe Institute of Technology & FIZ Karlsruhe, 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 (≈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, Web Developer (Full-Stack)

Developed SkillsPlanner.net linked data platform and tools

Aug 2013 – July 2014, Business Analyst

Alstom IS&T, Paris, France

Seme4 Ltd., Southampton, UK

Maintained IT service catalogue, designed user-facing IT services, conducted price analyses

June 2011 – Mar 2012, Strategy Analyst Trainee

Ad-hoc support for strategic management

Alstom Power, Baden, Switzerland

Aug 2008 – Jan 2013, **Web Developer** (Full-Stack)

Freelance, Darmstadt, Germany

Webmaster: Developed and maintained an online community (2006 – 2020; 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 Tönning 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: Qualitative and quantitative research, prototyping, user-centric evaluation, and experiment design Selected technical skills: Web development (backend & frontend): Python, JavaScript, PHP, HTML/CSS, Sass. Frameworks: React, Svelte, Vue.js, Node.js, D3, networkx, CKAN, WordPress, Django, Flask. APIs: REST, OpenAPI/Swagger. Mobile development: Apache Cordova, Capacitor, Monaca, Expo, ReactNative. Databases: (Mv)SQL, GraphQL, PostgreSQL, NoSQL (MongoDB, ElasticSearch), Redis. Virtualisation: Docker, Vagrant, Ansible. Testing & tools: Git, GitHub, Webpack, Fabric, Yarn, npm, babel, Puppeteer, svm. Crowdsourcing: Amazon Mechanical Turk, Prolific, Toloka. Office: Microsoft Excel, Word, LaTeX, Visual Basic, Google Docs. Machine Learning: Tensorflow, scikit-learn, Weka, PyTorch, HuggingFace, Tensorflow, pandas, NumPy, OpenCV, Amazon Rekognition, AllenAI ScienceParse, Grobit. Services: Amazon S3, Google Cloud, Google Data Studio, Google Colab. NLP: OpenAI GPT-3, nltk, spaCy, Textrazor, word2vec, doc2vec, fastText, LDA topic modelling. Semantic web: RDF, OWL, ontologies, knowledge graphs, Protégé.

#### Languages -

German (Mother tongue)

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

French (4 years, uncertified)

## **Publications**

30+ publications, including 5 journal articles and 6 full conference papers, with 30+ co-authors

Google Scholar profile

## Selected projects, software, and computational artefacts

Artworks generated with text-to-image synthesis (since 2021)

jonaso.de/artworks



### Selected research projects



AI prompt engineering (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

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

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/seme4/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 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

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 Design of the web presence of the GFBio Terminology Service.



SkillsPlanner Linked Data Platform (2015 – 2016) – 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 Artworks: jonaso.de/artworks Web development: jonaso.de/portfolio