

Luke Haliburton

UX Researcher

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Profile: I am a User Experience Researcher in the final phase of my PhD in Human-Computer Interaction at LMU Munich (dissertation submitted). My background is in Computer Science (PhD), HCI (PhD) and Engineering (MAsc, BEng). I have experience working in both academia and industry and have demonstrated excellent research and project management skills. I use qualitative and quantitative methods to conduct user studies and build prototypes (hardware and software) to investigate research questions on wellbeing technologies, knowledge management, and AI bias.

EDUCATION

09.2019 – 07.2024 (expected) | Munich, Germany

PhD Human-Computer Interaction

LMU Munich | Prof. Dr. Albrecht Schmidt

- Thesis: Designing Behavior Change Technologies for Workplace Wellbeing
- Focus: HCI, UX research, UX design, field studies, mixed-methods evaluations, prototyping

09.2015 – 08.2017 | Vancouver, Canada

MAsc Biomedical Engineering

University of British Columbia | Prof. Dr. Antony Hodgson

- Thesis: A Clinical C-arm Base-Tracking System Using Computer Vision for Guidance in the OR
- Focus: Computer vision, computer assisted surgery, medical devices, prototyping.
- GPA: 3.94/4.0

09.2012 – 05.2015 | Halifax, Canada

BEng Mechanical Engineering

Dalhousie University

- Senior Project: Feasibility of 3D scanning and printing for prosthetic limb sockets
- Sexton Scholar each year for a high academic average.
- GPA: 4.11/4.3

09.2010 – 05.2012 | Antigonish, Canada

Diploma in Engineering

St. Francis Xavier University

- Dean's List each year for a high academic average.
- GPA: 3.96/4.0

WORK EXPERIENCE

09.2019 – Present | Munich, Germany

UX Researcher

LMU Munich | Media Informatics Group

- Conduct literature research, identify appropriate research questions, and design user studies
- Conduct field- and lab-based user studies
- Analyze quantitative and qualitative data
- Lead multi-national research projects in teams of 3 to 9 people
- Teach Masters-level courses (e.g., Intelligent User interfaces, Practical Machine Learning)
- Supervise 30+ theses/project/seminar students
- Organize lab events and present research at international venues

01.2021 – 06.2022 | Munich, Germany

Co-Founder & CTO

Mindpalace

- Conducted qualitative user research to understand customer needs & inform product design
- Designed and developed (full-stack) iOS, Android, & Web apps for Mindpalace, a B2C product
- Conducted quantitative user research and A/B testing to inform ongoing product development
- Built the company from the ground up, establishing norms and processes
- Developed corporate strategy, pitched the company, procured funding, and led the development team

09.2017 – 04.2019 | Halifax, Canada

Mechanical Lead

Axem Neurotechnology

- Led the mechanical engineering team and reported directly to the CTO
- Designed and developed all mechanical aspects of the Axem Pro headset, a medical device for stroke rehabilitation
- Coordinated production and design with electrical and software teams and international manufacturers
- Rapidly generated prototypes and conducted user tests to optimize for performance, user experience, and safety

09.2015 – 08.2017 | Vancouver, Canada

Research Assistant

University of British Columbia | Surgical Technologies Lab

- Conducted engineering research exploring computer vision as a means for C-arm fluoroscopy tracking
- Developed custom software to track C-arm movements using computer vision
- Designed & implemented custom hardware prototypes
- Conducted quantitative tests to evaluate performance and iteratively update the design

05.2014 – 08.2014 | Halifax, Canada

Research Assistant

Dalhousie University | NSERC

- Designed and implemented an improved automated testing apparatus for thermal interface materials in extreme conditions
- Conducted literature research

SKILLS

Research Methods

User studies, lab studies, field studies, quantitative methods, prototyping, qualitative methods, focus groups, interviews, thematic analysis, inductive open coding, experience sampling

Data Analysis

R, Python, TensorFlow, Keras, SciKit, NLTK, Inferential & Descriptive statistics, ANOVA, Bayesian methods, time-series data

Software Development

Python, JavaScript, C/C++, HTML, CSS, Java, React, React Native, OpenCV, MySQL, AWS, REST API, Processing

Project Management & Entrepreneurship

Planning & forecasting, event planning, pitching, managing diverse teams, coordinating remote and local teams

Hardware Prototyping

3D design, 3D printing, Micropython, Arduino, digital I/Os, serial communication, sensors, actuators, signal conditioning, multi-modal sensing, discrete-time control, kinematics, planar robotics

English

Native

German

Basic

SELECTED PROJECTS

Evaluating Smartphone Overuse Interventions

We collected historical usage data from 1,039 users of *onesec* over 13 weeks and survey responses from 249 users. I led the quantitative analysis of over 2.5M data points and collaborated on the qualitative analysis. Using non-linear regressions, trend testing, and linear mixed models, we found that the intervention is effective over the long term with real users in the wild.

Technology-Supported Walking Meetings

I conducted two online surveys (N=171) and a series of interviews (N=10) with early adopters to understand design opportunities for walking meetings. I then designed and implemented a prototype, the Walking Talking Stick, which creates notes using AI-powered speech-to-text. I led a mixed-methods evaluation (N=60) and analyzed the qualitative and quantitative data. Our results show that the prototype facilitates focus, more interactive conversations, and more useful notes.

Full-Stack Development of B2C App

My co-founder and I developed Mindpalace, a digital second brain that lets users save insights from any media format (podcasts, articles, etc.). As CTO, I led the technical side of the product. I conducted user interviews, surveys, and usage analyses and led the full-stack development of the mobile and desktop apps. I won pitching awards, raised funds, and we were accepted to multiple accelerators.

AWARDS

2023

CHI Best Paper & MUM Best Paper Awards

Awarded to the best-reviewed papers

2020

SIGCHI Development Fund Award

Granted to conduct research internationally

2015 – 2017

Engineers in Scrubs Award

Awarded by UBC for academic achievement

2014

NSERC Undergraduate Student Research Award

To conduct engineering research at Dalhousie University

2010 – 2015

Numerous Academic Scholarships

Awarded by St. FX and Dalhousie Universities for academic achievement

VOLUNTEER WORK

01.2024 – Present | Munich, Germany

Startup Coach

Innovation and Entrepreneurship Center

- Create lesson plans and develop content
- Host interactive workshops with startup teams

11.2023 – Present | Munich, Germany

Entrepreneurship Coordinator

Munich Center for Machine Learning (MCML)

- Organize and host weekend bootcamps where AI researchers tackle entrepreneurship problems
- Coordinate stakeholders, venues, & content

11.2023 – Present | Melbourne, Australia

Demo Chair & Organization Committee

MobileHCI Conference

- Recruit submissions, curate accepted entries
- Plan and execute the demos track on site
- Coordinate with the conference organizing team

04.2023 – 07.2023 | Munich, Germany

Student Volunteer Chair

Hybrid Human Artificial Intelligence Conference

- Recruited, hired, and managed 12 volunteers
- Planned all volunteering tasks (~150 attendees)

09.2016 – 08.2017 | Vancouver, Canada

President of the Trainee Committee

Centre for Hip Health & Mobility

- Organized academic and social events for a multidisciplinary faculty of ~100 graduate students.
- Chaired committee meetings and acted as a liaison for students at the Centre

PATENTS

2020 | US20210228118A1 / WO2020006647A1

Apparatus and Method for Monitoring Brain Activity

Axem Neurotechnology

- Developed all mechanical aspects of the invention