

# CAROLINE BERGER

Aarhus, Denmark

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## EDUCATION

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### Aarhus University

*Doctor of Philosophy Student in Computer Science*

08/2023 – 08/2026 (expected)

*Aarhus, Denmark*

Advisor: Clemens Klokrose

Topic: Computational Notebooks, Coding Environments for Non-Professional Programmers, Interactivity

### University of Maryland

*Master of Science in Human-Computer Interaction - GPA - 4.0*

08/2021 – 05/2023

*College Park, Maryland*

Thesis committee: Professor Niklas Elmqvist (chair), Professor David Weintrop, Professor Joel Chan

Topic: Live Coding, Computer Science Education, Research through Design

### McGill University

*Bachelor of Science in Computer Science, Global Designation - GPA - 3.3*

08/2015 – 10/2019

*Montreal, Canada*

## COURSEWORK

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|---------------------|------------------------------|--|----------------------------|
| • Scholarly writing | • Human-Computer Interaction | • Experience Sampling                  | • Interaction Design       |
| • Software Design   | • UX Research Methods        | • Health Informatics and Visualization | • Educational Technologies |

## PUBLICATIONS AND OTHER SCHOLARLY WORKS

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- Kevin Tran-Nguyen, Caroline Berger, Roxanne Bennet, Michelle Wall, Suzanne Morin, and Fateme Rajabiyzadi. (2022) *Mobile App Prototype in Older Adults for Postfracture Acute Pain Management: User-Centered Design Approach*. *Journal of Medical Internet Research Aging* 5(4), e37772. <https://doi.org/10.2196/37772>. [Peer reviewed journal article]
- Constantinos K. Coursaris, Antoine Falconnet, Caroline Berger, Wietske Van Osch, Joerg Beringer, Sylvain Sénécal, and Pierre-Majorique Leger, “An Exploration of the Antecedents to Effective Recommender System Message Design” (2020). *Association for Information Systems Special Interest Group on Human-Computer Interaction 2020 Proceedings*. 13 [Abstract].
- Caroline Berger, and Martin P. Robillard (2017) “Novice Helper: Eclipse Integrated Development Environment to support novice programmers”, Montreal Symposium on Software Engineering Research <https://carolineberger.github.io/NoviceHelperPoster.pdf> [Poster].

## AWARDS

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- Alumni Scholarship Award, University of Maryland (2022)
- Breakthrough award for project impact on intelligence community, MITRE (2022)
- Study abroad scholarship award, University of Maryland (2021)
- Global Designation for completing research and study abroad program, McGill University (2019)
- Science Undergraduate Research Award, McGill University (2017)

## PROFESSIONAL EXPERIENCE

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### Navigo Sports Tours

*Tour Directory*

06/2023 – 08/2023

*Canada and Italy*

- Lead educational tours with university sports teams.
- Responsible for communicating with on-site vendors (restaurants, local guides, and hotels) to provide student athletes cultural learning experiences.
- Interpreting in French and Italian for tourism and sport activities.
- Collaborating with coaching staff for smooth delivery of practices, community clinics, and games.

## MITRE

05/2021 – 06/2023

*Intermediate Human Factors Engineer*

*McLean, Virginia*

- Performed **task analysis, thematic analysis, use case documentation, persona building, and journey map building** to collect user requirements for patients, data scientists, separating service members, and emergency response managers.
- **Quantified** results of summative usability studies to assess rollout of electronic health record system.
- Facilitated **co-design** of cybersecurity technologies.
- Iterated from **low-fidelity** paper prototypes to **high-fidelity** software engineered prototypes.

## McGill University Health Centre Research Institute

09/2020 – 04/2021

*UX and Software Engineering Research Assistant*

*Montreal, Canada*

- Co-authored manuscript for **publication**.
- Engaged medical stakeholders in design of **low- and medium-fidelity prototypes**.
- Facilitated **participatory design** sessions with older adults.

## Tech3Lab, HEC

05/2020 – 08/2020

*UX Research Assistant*

*Montreal, Canada*

- Laid foundation for study design through **literature review** of recommendation systems.
- Developed automated data cleaning and processing script.
- Conducted **usability testing** with **biometric sensors**.

## Thinkmax

08/2019 – 05/2020

*Technical Consultant*

*Montreal, Canada*

- Translated business requirements into technical solution through **software engineering**.

## Software Evolution Research Group, McGill University

05/2017 – 08/2017

*Software Engineering Research Assistant*

*Montreal, Canada*

- Explored programming behaviors of children in textual programming environments through **Eclipse plugin development, usability testing, and presenting findings in academic forums**.

## INVITED TALKS

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- “I Feel Like I’m Teaching in a Gladiator Ring”: Barriers and Benefits of Live Coding, Human-Computer Interaction Lab 40th Annual Symposium (2023)
- Human Factors Engineering for Sustainability, MITRE (2022)
- Personal Health Informatics for Behavior Change, MITRE (2022)
- Eclipse Plugin to Help Novice Programmers, McGill University (2017)

## TEACHING EXPERIENCE

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- Teaching Assistant for Human-Computer Interaction, Aarhus University (2023)
- Teaching Assistant for Information Organization, University of Maryland (2023)
- Curriculum Developer for front-end web development course, Digital Media Academy (2019)
- Curriculum Developer for mobile application course, Digital Media Academy (2019)
- Tutor for Computer Science Undergraduate Society (2018)
- Instructor for Computer Fundamentals, Unitarian Church of Montreal (2019)
- Instructor for EV3 LEGO robotics, Explorations Summer Camp (2019)
- Instructor for EV3 LEGO robotics, Harvard University x Digital Media Academy (2019)
- Instructor for Made by Girls Adventures in Programming, University of Pennsylvania, George Washington University x Digital Media Academy (2016)
- Instructor for Adventures in Game Design for iPhone and iPad, McGill University x Digital Media Academy (2016)
- Instructor for Adventures in 3D Game Design with Minecraft, University of Denver x Digital Media Academy (2016)

## SERVICE

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- Social Department Co-Chair McLean UX, Visualization and Decision Support, MITRE (2022)
- OpenSeries Co-Chair UX, Visualization and Decision Support, MITRE (2022)
- VP Communication Italian Studies Student Association, McGill University (2018)
- VP Communication Computer Science Undergraduate Society, McGill University (2017)
- First-Year Representative to the Board of Directors of the Management Undergraduate Society, McGill University (2015)

## SKILLS

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**Research:** Literature review, Usability testing, Interviewing, Focus groups, Heuristic evaluation, Task analysis, Thematic analysis, Journey mapping, Personas, Contextual inquiry, Affinity diagramming, Biometric data collection, Diary studies, Co-design

**Design tools:** AdobeXD, Figma, Balsamiq, Axure

**Software languages & frameworks:** Python, Javascript (Vue, ReactJS), Java, C#, .NET, SQL, C, C++, UML, Git, TFS

## LANGUAGES

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**English:** Fluent C2

**Italian:** Professional C1

**French:** Conversational B2