

# Alexander Hambley

## PROFILE

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Alexander is an award-winning Computer Science PhD researcher and Associate Lecturer. Published at top Computer Science conferences, his research has focused on applying machine learning to improve web accessibility for visually impaired users. He has experience teaching algorithms, data structures, and user experience (UX) at The University of Manchester and the Open University. Before his PhD, Alexander achieved a first-class BSc (Hons) in Computer Science and has worked as a Software Developer and in IT Support.

## EDUCATION

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**The University of Manchester** **January 2020 – Present**  
Computer Science, PhD Manchester, UK

- Thesis title: Empirical Web Accessibility Evaluation for Blind Web Users
- Supervised by: Prof Simon Harper, Dr Markel Vigo, Dr Yeliz Yesilada

**The University of Nottingham** **September 2016 – June 2019**  
Computer Science, BSc (Hons); First Class (76%) Nottingham, UK

- Dissertation: A Study of the Addictive Nature of Smartphones and Social Media (84%)

## WORK EXPERIENCE

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**The Open University** **September 2022 – Present**  
Associate Lecturer Manchester, UK

- Successfully taught Algorithms, Data Structures and Computability to a cohort of over 200 students, achieving an average grade of a strong 2.i, demonstrating the ability to communicate complex technical concepts to students effectively.
- Implemented effective distance learning methods that resulted in high student coursework grades, showing the ability to adapt to new technologies and provide effective online instruction.
- Contributed course feedback to directors, demonstrating collaboration with other stakeholders to improve the curriculum and teaching methods.

**The University of Manchester** **January 2020 – Present**  
Lead Postgraduate Teaching Assistant  
Manchester, UK

- Promoted to Lead Postgraduate Teaching Assistant in September 2022. Oversaw grading and feedback of coursework for over 150 students in User Experience, demonstrating the ability to manage large volumes of work and maintain consistency and accuracy.
- Coordinated and facilitated laboratory sessions for several courses, providing valuable guidance and instruction to groups of 30 students. Mentored and delivered feedback to students for group projects, facilitating group work and helping students develop essential teamwork and communication skills.

## HeX Productions

May 2019 – September 2019

Software Engineer

Nottingham, UK

- Worked as a full-stack developer to create an accessible e-Learning website adhering to stringent accessibility guidelines, improving the learning experience for visually impaired students, and promoting inclusivity in the education sector.
- Created and modified public sector websites, including the Queen Mary University of London, with WordPress, PHP, JS, CSS and TerminalFour, improving accessibility and allowing users to access information and services more quickly and efficiently, increasing the reach and impact of organisations.
- Established a successful new technology event in Nottingham from the ground up, attracting over 70 attendees from the technology industry on the first event and delivering an opportunity for networking and knowledge sharing for local technology professionals.

## The University of Nottingham

August 2018 – December 2018

IT Support Tutor

Nottingham, UK

- Advised over 100 students with registration difficulties, timetable problems, and student ID concerns, utilising problem-solving and interpersonal skills to ensure students received the necessary support.
- Developed advanced independent and collaborative working skills by efficiently managing and prioritising a high volume of student inquiries and effectively communicating with students and colleagues to provide timely and accurate information.
- Demonstrated strong technical aptitude by troubleshooting software and hardware issues and providing technical support to students and staff in a timely and professional manner.
- Organised and delivered IT training sessions, increasing the technical proficiency of students and staff in various software applications and tools.

## The University of Twente

June 2018 – August 2018

Research Software Engineer (Intern)

Enschede, Netherlands

- Contributed to successfully developing social robot prototypes to assist children with ASD.
- Utilised Python and associated APIs to create software systems and rapid, effective, low, and high-fidelity prototypes. Demonstrated a practical understanding of agile methodologies and principles, utilizing rapid prototyping to effectively communicate design ideas and concepts and quickly validate user needs and identify potential issues.

## AWARDS

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- **Best Paper.** The 19th International Web for All Conference. April 2022.
- **EPSRC Doctoral Studentship.** Engineering & Physical Sciences Research Council. January 2020 – Present.

## FIRST-AUTHOR RESEARCH PUBLICATIONS

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- **Towards Optimised Population Sourcing for Web Accessibility Evaluation.** Alexander Hambley, Yeliz Yesilada, Markel Vigo, Simon Harper. The 20th International Web for All Conference. (Accepted, April 2023.)
- **Web Structure Derived Clustering for Optimised Web Accessibility Evaluation.** Alexander Hambley, Yeliz Yesilada, Markel Vigo, Simon Harper. International World Wide Web Conference 2023.(Accepted, April 2023.)
- **Optimising the Website Accessibility Conformance Evaluation Methodology.** Alexander Hambley, Yeliz Yesilada, Markel Vigo, Simon Harper. The 19th International Web for All Conference. April 2022. **Best Paper Winner.**

- **Empirical Web Accessibility Evaluation for Blind Web Users.** Alexander Hambley, Yeliz Yesilada, Markel Vigo, Simon Harper. ACM SIGACCESS Accessibility and Computing. January 2021.

## PRESENTATIONS

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- International World Wide Web Conference 2023. April 2023 (Scheduled. Paper accepted.)
- The 19th International Web for All Conference. April 2022. **Best Paper Winner.**
- ACM SIGACCESS Accessibility and Computing. October 2020.
- Accessibility Nottingham. Plenary.

## PROFESSIONAL ACTIVITIES

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### Publicity Chair:

- The 20th International Web for All Conference. September 2022 – Present.
- The 19th International Web for All Conference. September 2021 – April 2022.

### Peer Reviewing:

- ACM Transactions on the Web (TWEB). 2 Reviews in 2022.
- ACM Transactions on Accessible Computing (TACCESS). 2021.

## CERTIFICATIONS & SKILLS

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### Certifications:

- Accessibility of e-Learning. The Open University. January 2023.
- Machine Learning. DeepLearning.AI, Stanford University. Coursera. July 2022.
- Designing Effective Science Communication. University of Colorado Boulder. Coursera. June 2022.
- Accessible Documents: Word, PowerPoint, Acrobat. WebAIM. August 2019.

### Professional Skills:

- Languages: Python; R (Primary). PHP; SQL; Java; JavaScript; MATLAB (Secondary).
- Frameworks: Scikit-learn; Numpy; Pandas; TensorFlow; Flask; BeautifulSoup; Scrapy; React.JS; LAMP.
- Tools: Docker; GIT; MySQL; SQLite; PHPMyAdmin; Android Studio; XCode.
- Soft Skills: Research; Software Engineering; Project Management; Writing; Public Speaking; Time Management; Scientific Communication; Leadership; Collaboration

### Interests:

- Photography; Programming; Running; Formula 1; Volunteering.