Aneesh Tarun
HCI Research Scientist

aneeshpt at gmail dot com
Ontario, Canada

Legal Work Status: I am a Citizen of Canada and eligible for TN-1 and O-1 Work Visas

Skills

Research: • Generative Research • User Experience (UX) Design • Design Thinking • Ideation / Brainstorming • Experimental Design • Qualitative Studies • Empirical Studies • Behavioral Analytics • Statistics • Presentations & Demos • Research papers and patents

Technical: • Hardware and software prototyping • PyTorch • NumPy • Pandas • Python • R • C# • Unity • Node.js • JavaScript • Digital fabrication including 3D printing and laser cutting • ESP32 Microcontroller • Adobe Creative Suite • Microsoft Office

Other: • Analytical skills: Critical Thinking, Communication, and Collaboration • Mentoring • Workshop development • Workshop moderation • Course development

Publications and Patents: https://scholar.google.ca/citations?user=jbuKjnwAAAAJ&hl=en

Experience

Huawei Technologies – Consumer Business Group / Senior Researcher
April 2022 – Present

As a part of a strategic research group, I work on the *Strategy* and *Design* stages of emerging technologies and interaction paradigms. My work at Huawei has had the following **impact**:

- Applied for two patents; Four feature suggestions to product teams across three product categories; Three mixed methods research studies evaluating new input methods and modeling user behaviour; One research paper under submission.

More specifically, I work on:

- Building and testing proof-of-concept functional prototypes to guide product design and strategy for novel technologies.
- Conducting both qualitative and quantitative research to uncover user needs, behaviours, and also to validate early designs in the generative research stage.
- Statistical analysis / quantitative modeling of the user behavior.
- Providing actionable insights and feature suggestions to product teams to guide product roadmap.

Research Methods used: Prototyping; Concept development and testing; Surveys; Discovery work; Early-stage usability benchmarking and analytics; Qualitative and quantitative evaluation.
Artifacts generated: Research Plan; UI Mock-ups; Functional prototypes; Data analysis scripts; Research Reports; Presentations with research summaries and insights; Research Paper; Patent applications.

Synaesthetic Media Lab / Postdoctoral Research Fellow
May 2017 – March 2022

I lead three research projects, with an interdisciplinary team of researchers, educators, and designers, examining the advantages of spatial and tangible computing in diverse application areas, including cross-device interactions, virtual reality storytelling, education, human-robot interaction, and end-user software programming. My work at Synaesthetic Media Lab has had the following **impact**:

- Eight research papers; Three international workshops; Mentored four graduate students; Two software toolkits for use in research.

In this role, my initiatives include:

- Identifying user challenges and gaps in research through secondary research, interviews, and workshops.
- Ideating and exploring the design space through developing artifacts such as wireframes, and software and hardware prototypes.
- Mentoring graduate students in User-centered design and agile software development methodologies.

- Data Analysis and disseminating research findings through technical reports, publications, invited talks, workshops, and demonstrations.
- Developing standard practices for research and design to ensure cross-project consistency in the research lab.

Research Methods used: Sketching; Prototyping; Usability testing; Surveys; Analytics; Concept development and testing; Moderated and Remote moderated testing; Qualitative and quantitative evaluation.
Artifacts generated: Research Plan; Sketches and Mock-ups; High-fidelity tangible and VR prototypes; Data analysis scripts; Research Reports; Presentations with research summaries and insights.

Ryerson University and **University of Toronto** / Course Instructor
January 2020 – April 2022
I developed courses, workshops, and mentored undergraduate and graduate students. Courses taught:
- [RTA962] Interaction Design
- [FCD222] Coding for Creatives
- [INF2171H] Usability Assessment – Concepts, Methods, and Tools (graduate level)
- [CFPN535] User Experience Design
- [MP8995 & RTA995] Embodied Digital Media – Research/Design (graduate level)

Synaesthetic Media Lab / HCI Researcher
October 2014 – April 2017
I designed, developed, and evaluated a web-based software toolkit for prototyping multi-device interactions. With this tool, I created three levels of scaffolding to support software prototyping by designers, novice developers, and expert developers. In addition, I conducted heuristic evaluation, usability testing, workshops and analysis on different aspects of the toolkit to determine tool effectiveness.

Xuuk Inc. / Interactive Media Developer
September 2013 – January 2014
I was part of the team that designed and built an immersive roller coaster experience at a shopping mall in Bangkok, Thailand. I investigated novel approaches to sensing user actions. I developed the graphics pipeline and software interface for customizing the roller-coaster experience.

Human Media Lab / Doctoral Researcher
September 2010 – September 2014
At the Human Media Lab, I worked on exploring the design space on flexible interaction devices. My work has involved brainstorming, sketching interaction concepts, prototyping devices and interfaces, building software frameworks, and evaluating interaction techniques. In this role:
- (Concept development and testing) I successfully developed three working flexible display prototypes.
- I conducted three empirical studies (Fitts' Law) to investigate the role of flexibility in human motor control performance.
- I presented my research work at international conferences, symposiums, and popular press.
- My work was awarded a patent “Interaction Techniques for Flexible Tablet PC and Paper Tablets.” U.S. Patent No. 9,841,867.

Education

PhD in Computing
2010 – 2017
Queen’s University, Kingston, ON, Canada
Thesis: Electronic Paper Computers: Interacting with Flexible Displays for Physical Manipulation of Digital Information.

Master of Science in Human-Computer Interaction
2008 – 2010
Georgia Institute of Technology, Atlanta, GA, USA
Master’s Project: Augmented Collaborative Spaces – Supporting remote collaborations with virtual worlds.