Jessica Ip

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Education

University of British Columbia (UBC) Vancouver, Canada
B.A. in Cognitive Systems, Cognition and the Brain 09/2015 – 05/2020
Graduation with First Class Standing
Senior Thesis: An Interactive Haptic Device Visualization Tool for Device Creators and Repurposers
Advisors: Prof. Ronald A. Rensink and Prof. Karon E. MacLean

Research Experience

Visual Cognition Lab, UBC Psychology Vancouver, Canada
Project Leader and Research Assistant with Prof. Ronald A. Rensink 09/2016 – Present

- Investigating the human perception of correlation in data visualizations with applied research methods from psychophysics. Studied feature and conjunction search and the role of attention in visual search. Led and managed a team of undergraduate researchers for nine school terms.

Topics: Information Visualization, Perceptual Processing, Psychophysics, Vision Science

Max Planck Institute for Intelligent Systems & UBC Vancouver, Canada
Research Assistant with Prof. Karon E. MacLean and Dr. Hasti Seifi 04/2018 – 08/2019

- Designed and conducted a user study on a novel haptic device library (Haptipedia), leading to a CHI '19 publication. Co-led a study on crowdsourcing incentives on Haptipedia.

Topics: Human-Computer Interaction, Haptics, Crowdsourcing

Sensory Perception & Interaction Lab, UBC Computer Science Vancouver, Canada
Research Assistant with Prof. Karon E. MacLean 01/2018 – 04/2018

- Explored low-DOF robot design and construction to investigate the display and recognition of emotion. Used low-cost and rapid prototyping techniques to construct simple robotic behaviors using graphical and audio interfaces.

Topics: Robotics, Low-fidelity Prototyping

Laboratory for Computational Intelligence, UBC Computer Science Vancouver, Canada
Research Assistant with Prof. Giuseppe Carenini 09/2017 – 04/2018

- Studied the multi-attribute utility theory (MAUT) and its employment in quantitative presentations of subjective preferences in decision-making models. Designed a usability test for the ValueCharts web application.

Topics: Web-based Interactive Visualizations, Multi-Attribute Utility Theory, Decision-Making

Moritz Lab, UBC Ophthalmology & Visual Sciences Vancouver, Canada
Laboratory Intern with Prof. Orson Moritz 04/2014
Topics: Visual Science, Neuro-Ophthalmology, Retinitis Pigmentosa, Macular Degeneration

Publications

Peer-Reviewed Papers

1. Seifi H., Fazlollahi, F., Oppermann, M., Sastrillo, J.A., **Ip, J.**, Agrawal, A., Park, G., Kuchenbecker, K.J., MacLean, K.E.. "Haptipedia: Accelerating Haptic Device Discovery to Support Interaction and Engineering Design." Conference on Human Factors in Computing Systems (CHI'19), 2019, pp. 1-12.

Non-Refereed Papers

1. Seifi, H., **Ip, J.**, Agrawal, A., Kuchenbecker, K. J. MacLean, K. E. "Toward Expert-Sourcing of a Haptic Device Repository." CHI Workshop on Crowds and Creativity, 2019, pp. 1-4.

Poster Presentations and Talks

Poster Presentations

1. **Ip, J.**, Pertels, Y., Chai, W., Thongprasert, S. (2017). "Image Transitions: Visual Search in the Dynamic World." UBC Multidisciplinary Undergraduate Research Conference. Vancouver, Canada.
2. **Ip, J.**, Tembo, T., Seifi, H., Fazlollahi, F., Oppermann, M., Sastrillo, J. A., Agrawal, A., Park, G., Kuchenbecker, K. J., MacLean, K. M. (2019). "Haptipedia: A Haptic Device Library to Support Interaction and Engineering Design." DFP Design Showcase 2019. Vancouver, Canada.

Talks

1. **Ip, J.**, Pertels, Y., Chai, W., Thongprasert, S. (2017). Image Transitions: Visual Search in the Dynamic World. Oral presentation at the UBC Psychology Undergraduate Research Conference. Vancouver, Canada.

Research Grants

Undergraduate Student Research Award, NSERC 2019

Teaching Experience

Directed Studies Supervisor at University of British Columbia Spring 2020
Research in Cognitive Systems (COGS 402)

Workshop Instructor at UBC Visual Cognition Lab Spring 2019
Workshop Series on Psychophysics Methods and Data Analysis

Teaching Assistant at University of British Columbia Fall 2018
Research Methods in Cognitive Systems (COGS 303)

Work Experience

Advesa Digital Solutions Inc. Burnaby, Canada
Technical Writer 06/2020 – Present
Writing REST API and GUI documentation for e-commerce software.
Technology: Confluence, Postman, Swagger, JIRA

Emerging Media Lab, UBC Vancouver, Canada
Academic Assistant 11/2017 – 04/2018
Created and facilitated Virtual Reality and Brain-Computer Interface demos and workshops.
Technology: Virtual Reality (HTC ViveTM), Brain-Computer Interface (MuseTM Headband)

Volunteer Experience

Student Volunteer at ACM SIGGRAPH 08/2018
Volunteered as a docent for the CAVE project by the NYU Future Reality Lab.

Course Collaborator for Stanford Scholar 05/2016 – 08/2016
Helped produce and edit content for crowdsourced research talks.

Communications Director at Social Diversity for Children Foundation 01/2014 – 07/ 2016
Served on the executive team of a charity that empowers children with disabilities.

Technical Skills

Languages: R, Java, C/C++, JavaScript, HTML/CSS, MATLAB
Toolkit & Environments: Excel, Git, Tableau, IntelliJ, MAXQDA, LaTeX, Arduino, Unity3D, Blender (3D Modeling), Photoshop
Research: Quantitative Analysis, Psychophysics, Diary Studies, User Interviews, Qualitative & Thematic Analysis, Data Collection (human subjects)