

Sneha R. Krishna Kumaran

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EDUCATION

University of Illinois at Urbana-Champaign, Urbana, IL

August 2015—Expected May 2021

PhD, Computer Science (Human Computer Interaction)

Proposed Thesis: "Fostering Feedback Seeking Behavior in Novices"

Advisor: Brian P. Bailey

Oregon State University, Corvallis, OR

September 2012—June 2015

BS, Computer Science

Thesis: "Identifying a Ranking of Plant Preferences for a Pollinator", June 2015

Advisor: Rebecca Hutchinson, Thomas G. Dietterich

RESEARCH EXPERIENCE

Feedback Seeking Behavior: University of Illinois, Urbana, IL.

September 2017 – Present

Graduate Research Assistant, ORCHID Research Group, Advisor: Brian P. Bailey

Conducted semi-structured interviews to determine factors of what prompted designers to seek feedback and what they perceived to be barriers to feedback seeking behavior. Identified 12 emergent themes from the interviews. Further quantified the interviews through a quantitative survey. Created a taxonomy for the triggers and deterrents of feedback seeking behavior.

Methods for improved peer feedback in design education: University of Illinois, Urbana, IL.

August 2015 – May 2017

Graduate Research Assistant, ORCHID Research Group, Advisor: Brian P. Bailey

Conducted a classroom study to provide empirical evidence for how mentorship and providing context affect the feedback quality and the engagement students have with the feedback in a product design course. This study required both qualitative and quantitative analysis.

Paper: Increasing Quality and Involvement in Online Peer Feedback Exchange (CSCW 2018; Acceptance Rate: 27%)

Cross-domain and cross-culture collaboration: Bosch, Pittsburgh, PA

May 2017—August 2017

Research Intern, Host: Lisa Yu

Large corporations often consist of small internal teams that function independently from one another. Therefore, it can be difficult for teams with different expertise to collaborate and build off of each other's ideas. To address this, we developed a method that can match teams to one another based on a schema of the challenges they face in addition to their expertise.

Undergraduate Research Assistant: Oregon State University, Corvallis, OR

September 2013 – June 2015

Undergraduate Research Assistant, Advisors: Rebecca Hutchinson, Thomas G. Dietterich

Modeled a pollinator's interaction with various plant species in a meadow

Used a multinomial model and gradient descent to explain the number of visits a pollinator was observed making

Found that assigning a preference to each plant improved the model

Cumulated in an undergraduate thesis

TECHNICAL EXPERIENCE

Facebook Inc., Menlo Park, CA.

May 2019—July 2019

Machine Learning Infrastructure Engineering Intern at WhatsApp, Mentor: Vivek Srivastava

Built a pipeline that would handle spam reports from the initial reporting by a client all the way to logging a translated spam report into a database and rendering the report for manual review. Used FB-Learner to develop and deploy text-based deep neural net classifiers to detect content that violated WhatsApp's content policies for Business clients.

Bosch, Pittsburgh, PA.

May 2017—August 2017

Research Intern, Host: Lisa Yu

Developed a MEAN based social community for expert technicians to share their knowledge and novices to learn. This app displayed information that was gathered as a chatbot (built using api.ai) asked questions to a mechanic about his work process.

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Intel Corporation, Hillsboro, OR.

June 2015 – August 2015

Validation Intern, Hosts: Sushmith Hiremath, Alexander Gutkin

Developed a kernel driver for firmware security validation of Intel's Xeon Phi software stack

Added two modules to test for unique CPU APIC IDs and correct register access types utilizing Python and C++ extensions

Cross-compiled the driver to test on the older Xeon Phi Knight's Corner coprocessor

PUBLICATIONS

Sneha R. Krishna Kumaran, Deana C. McDonagh, and Brian P. Bailey. 2017. Increasing Quality and Involvement in Online Peer Feedback Exchange. Proceedings of the ACM Human-Computer Interaction. 1, 1, Article 63. Acceptance Rate: 28%

Motahhare Eslami, Sneha R. Krishna Kumaran, Christian Sandvig, and Karrie Karahalios. 2018. Communicating Algorithmic Process in Online Behavioral Advertising. Proceedings of the ACM Conference on Human Factors in Computing Systems, 2018.

Sneha R. Krishna Kumaran. 2019. Fostering Feedback Seeking Behavior in Novice Designers. In Proceedings of the 2019 on Creativity and Cognition(C&C '19). ACM, New York, NY, USA, 653–658. DOI: <https://doi.org/10.1145/3325480.3326564>

Sneha R. Krishna Kumaran, Wenshuan (Wendy) Shi, Brian P. Bailey. 2019. Triggers and Deterrents of Feedback Seeking Behavior in Design. ACM CHI 2020. *Under Submission*.

TEACHING/SERVICE

PURE Research Mentor

January 2018-May 2018

Mentored undergraduate women in computer science to implement a research prototype. In addition to helping them gain technical and research skills,

Graduate Teaching Assistant

January 2018-May 2018

TA for the graduate level course in Human Computer Interaction. Duties included grading and directing students through their term projects.

Graduate Ambassador

2016-2018

Helped the computer science graduate admissions to organize a graduate women in computer science session during the graduate student recruitment weekend.

SKILLS/COURSEWORK

Qualitative Methods: Interviews, Usability testing

Quantitative Methods: Statistics, Survey design, Regression, Hierarchical statistical methods

Programming Languages: Python, R, Erlang, Haskell, JavaScript and JavaScript Libraries, HTML, SQL

Courses: Research methods in Human-Computer Interaction, Introduction to Human-Computer Interaction, User-Interface Design, Data-Driven Design, Cyber-Physical-Human Systems, Cognitive Science, Computer Vision, Natural Language Processing, Machine Learning

HONORS AND AWARDS

Teachers Ranked as Excellent, University of Illinois Urbana Champaign

2018

Ducilla Shepard Smith Award, Oregon State University.

2013 – 2015

Rensselaer Polytechnic Institute Medalist.

2010