Sneha R. Krishna Kumaran

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EDUCATION

University of Illinois at Urbana-Champaign, Urbana, IL **Expected May 2021**
PhD, Computer Science (Human Computer Interaction), GPA: 3.83
Proposed Thesis: "Fostering Feedback Seeking Behavior in Novices"
Advisor: Brian P. Bailey

Oregon State University, Corvallis, OR **June 2015**
BS, Computer Science, GPA: 3.98

SKILLS/COURSEWORK

Programming Languages/Frameworks: Python, R, Erlang, Haskell, JavaScript, React, Angular, PHP/Hack, C/C++, SQL, PyTorch, Android Studio, MongoDB, Node.js, AlphaPose

Quantitative/Qualitative Analysis Methods: Interviews, Iterative Coding, Participatory Design, Usability testing**,** Statistics, Survey design, Regression, Hierarchical statistical methods, Mixed-methods, Experimental design

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

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

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.

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Bosch, Pittsburgh, PA. **May 2017—August2017**
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.

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

RELEVANT PROJECTS

Tutoring system for classical Indian dance, Personal Project (in progress)
Goal: Build and test a web-based tutoring system to provide immediate feedback to dancers without the need of an instructor
Utilizing AlphaPose library for pose detection on dancers
Surveyed dance teachers to determine heuristics for providing basic corrections to novice dancers

WhatsApp user spam reporting accuracy, Personal Project (in progress)
Goal: Determine what messages WhatsApp users consider to be spam and how UI interactions can increase user reporting accuracy
Collected samples of spam messages that users believed were spam
Compared the reported spam messages to the current policy
Experimentally compared the accuracy of users with two different spam reporting interfaces

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.

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**