Stanford University

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Professor Bernd Girod, Director
Brown Institute for Media Innovation
Stanford University

Dear Prof. Girod and the Brown Magic Grant Evaluation Committee,

I am writing to express my complete support of Lydia Chilton and Jessica Ouyang's Magic Grant proposal "**Generating Emotional Impact in Narrative**" at the Brown Institute for Media Innovation at Stanford and Columbia. This project brings together a unique combination of world-class human-computer interaction (HCI), crowdsourcing, and natural language processing (NLP) researchers at Stanford and Columbia to carry out this important research project. Understanding and communicating human emotions, such as humor or suspense, is key to any successful story. This novel project looks at better understanding and generating human emotions using crowdsourcing and NLP.

Decomposing and crowdsourcing a creative task, such as generating humor, is clearly a challenging problem. Unlike other creativity support tools, we are explicitly measuring the quality of the output, which makes it additionally challenging. My confidence in the success of the project is based on the expertise of the student leading the effort, Lydia Chilton. Lydia is my most senior graduate student and she has a record full of groundbreaking accomplishment and top research publications. She and her collaborators at MIT introduced crowdsourcing as a tool in HCI eight years ago, and it has exploded in popularity ever since. Every project she has done has pushed the limits of how to break complex problems into modular pieces that the crowd can work on independently. After a postdoctoral year working on this project, I expect Lydia secure a faculty position at a top 10 CS department.

Many other crowdsourcing projects focus on tasks that are trivial to decompose such as labeling 1000 images by 1000 different people. In contrast, Lydia crowdsources problems that need a global understanding of all the data, such as creating a taxonomy of all of the images that organizes them by themes with appropriate human readable labels for easy navigation. Additionally, she is not content to work on toy problems. She has deployed her tools to two top tier conferences to help organize their accepted papers (in the 100s) into sessions that shaped the conference program. Many of the hard problems she chooses to work on have solutions that are often subjective in nature and thus hard for computers, or even humans, to solve.

Understanding emotional impact is the most important thing we can do to generate compelling content. Although the emotional range of humor is clearly a subset of all emotion, it is still a useful tool in itself. I could certainly see faculty using the tool this project will develop to make lectures more engaging and more memorable by selectively generating humor that is content specific. I wish my

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children's educational material were more engaging and I could see the tool also being used there. The ability to generate emotionally impactful narratives – humorous and otherwise - will touch all aspects of communication, in fields as diverse as education, law, journalism, and business.

The tool this unique Stanford-Columbia collaboration will build and evaluate is an excellent way to introduce these results to the world. Humor fascinates people. It is a communication skill rarely taught that many people want to cultivate and hone. We are confident that we can attract a large user base that is interested in learning to write funny tweets – political or otherwise. Although comedy often seems less important than drama, it is equally prevalent, and it is certainly more than just jokes. The rise of news satire on television as a dominant form in which young people take in political content has shown that humor has a strong influence on society.

In their Magic Grant project, Lydia and Jessica will show how we can use crowdsourcing to generate humorous and suspenseful narratives. They will also explore which pieces of the crowd workflow can be automated using the latest in NLP research. Their research has the unique potential to help make many types of communication much more enticing and enjoyable. I am especially excited by the potential broader impacts of this work on an education project I am pursuing at Stanford. I am delighted to offer my continued support and advising to these fine researchers on this Magic Grant project.

Sincerely,

Professor James A. Landay

James Landay earned his PhD in Computer Science from Carnegie Mellon University in 1996. He is currently a Professor of Computer Science at Stanford University. Prior to joining Stanford, he was a Professor in Information Science at Cornell Tech in New York City for one year and a Professor of Computer Science and Engineering at the University of Washington for 10 years. From 2003-2006, he also served as the Director of Intel Labs Seattle, a leading research laboratory with twenty researchers investigating various aspects of ubiquitous computing. Before that, he was a tenured Associate Professor of Computer Science at the University of California at Berkeley. In these roles, he has had the opportunity to closely evaluate a large number of researchers in computer science, human-computer interaction (HCI), design, and ubiquitous computing (Ubicomp). Graduate students and postdocs he has worked with have gone on to faculty/research positions at Stanford (2), CMU, UW, UCSD, Michigan, Maryland, Microsoft Research, and Google Research, as well as to other positions in industry and academia. He has been recognized as a leader in the field by his election to the ACM SIGCHI Academy in 2011.

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