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Dear Colleague,

I am writing to enthusiastically endorse Professor Jeff Heer for an NSF Career award.

Jeff conducts research in human-computer interaction, with an emphasis on interactive visualization and social computing. For example, his thesis work introduced sense.us, a web application for analysis of 150 years of U.S. Census data that allows users to work as a group in analyzing the data by commenting on and annotating visualizations. Jeff is also known for creating prefuse, an open-source toolkit for authoring information visualization applications. It has been downloaded over 100,000 times and is widely used across industry and academia.

In this proposal, Jeff will investigate the "Interactive Tools for Data Transformation and Visualization." The increasing scale and accessibility of digital data is an under-exploited resource with which we might better understand and improve governance, business, academic research, and our personal lives. However, for the data to prove broadly useful, people from a variety of backgrounds must be able make sense of it. The goal of this research is to enable a broad class of data analysts to more effectively work with data by introducing novel interactive tools for data transformation and visualization. Jeff proposes to target two critical challenges in the data life-cycle: visualization design -- creating effective visual representations of data to gain insight -- and data wrangling -- assessing data credibility and transforming data into usable forms. His research will produce novel visual and interactive techniques for specifying visualizations and authoring reusable data transformations. It will also contribute new systems that marry automated analyses (e.g., visual perception models, data mining algorithms) with direct-manipulation graphical interfaces. Through both controlled studies and real-world deployments, he will evaluate the approaches and distill best practices for facilitating data analysis.

Jeff began his appointment as Assistant Professor of Computer Science at Stanford University on January 1, 2009.

The Computer Science Department is fully committed to supporting Jeff in all ways possible. Through our mentorship program an established professor will guide Jeff through his early years here at Stanford. We limit the teaching load of junior faculty to one course per quarter, and we make additional teaching load reductions available for instructors of large courses and for instructors who jointly develop new courses. We provide each new faculty member with state-of-the-art computing/networking equipment. Junior faculty receive reduced committee assignments and administrative loads. Most important, we have special programs designed to support junior faculty development. Jeff will receive \$335K under our start-up funds program.

I have read and I endorse Jeff's Career Development Plan. I attest that Jeff's career development plan is supported by and integrated into the educational and research goals of the department and the organization. I personally commit to the support and professional development of the PI. I certify that Jeff meets the eligibility requirements for an NSF Career Award.

Sincerely,

A handwritten signature in blue ink that reads 'Jennifer Widom'.

Jennifer Widom  
Fletcher Jones Professor  
Chair, Department of Computer Science  
Stanford University  
July 12, 2010