

**Department of Political Science**

Pennsylvania State University  
203 Pond Lab  
University Park, PA 16802

**PENNSTATE**



T 814.865.4598  
F 814.863.8979  
E [bdesmarais@psu.edu](mailto:bdesmarais@psu.edu)  
W <http://sites.psu.edu/desmaraisgroup/>

February 1, 2017

Dear DSPGP Selection Committee Members:

Sayali Phadke conveys extraordinary vision for a third-year PhD student, and exhibits a remarkable ability to cross disciplinary bounds. I offer my highest recommendation that she be offered a Data Science for the Public Good Program (DSPGP) Summer Fellowship. I have been working closely with Ms. Phadke for the last year. She is a Big Data Social Science fellow, has taken two graduate courses with me, and has worked as my research assistant and co-author. She came to me with an interest in studying a unique combination of topics—network science, causal inference, and public policy. This is a fantastic intersection of interests. One of the biggest problems in data science is the risk of attributing causation to correlation. Ms. Phadke demonstrates a sophisticated awareness of this problem and an intense focus on developing approaches that directly investigate causality in Big Data. Over the past year she has gathered data on social networks among state legislators, replicated past experimental studies of social influence in lawmaking, and implemented a cutting-edge methodology for testing for effects in experiments on networks. Our project, on which she is taking the lead, seamlessly weaves together complex concepts, methods and data drawing from statistics, computer science, social networks and political science. I am confident that she will thrive in the fast-paced, multidisciplinary, innovative environment at DSPGP.

In addition to her pure intellectual promise, Ms. Phadke has proven herself to be an excellent team player, and an attentive student. I have four other graduate researchers in my group. Despite the fact that all of my other group members are further along in their programs, Ms. Phadke has quickly emerged as someone on whom everyone relies. She learns from her colleagues and is attentive and responsive to them, from the smallest coding issue to broad conceptual challenges in research design. Ms. Phadke has taken my graduate courses on network analysis and social data analytics. She has clearly mastered the material that we covered in those courses, and has helped several of her classmates in the contexts of group discussion and problem solving. Ms. Phadke also exhibits excellent presentation skills. She has presented our collaborative research at two conferences, and has proven herself to be a very clear and engaging presenter.

In summary, Sayali Phadke exhibits exceptional promise as a young scholar. She is at home in multidisciplinary audiences, and enthusiastic to contribute to areas outside of her home discipline. Ms. Phadke would be an excellent addition to any research team that brings technically sophisticated solutions to bear to solve social science problems. Please do not hesitate to contact me if you would like me to elaborate on anything in this recommendation letter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bruce A. Desmarais'.

Bruce A. Desmarais Ph.D.

Associate Professor  
Department of Political Science  
Faculty Affiliate  
Institute for CyberScience