

Q2.

The goal of the **SDAL Data Science for the Public Good Student Fellow program** is to inspire students to pursue science, including statistics, social and behavioral sciences, technology, engineering and math careers by engaging them in socially important research problems and demonstrating that contributions are needed from all degree levels. The primary focus will be at the interface of data analytics and understanding (modeling) the social condition - integrated human habitat, health, and well-being. **DSPG** Student Fellows will be part of vertically integrated interdisciplinary research teams. Students from all disciplines are welcome to apply.

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Q26. \* Requested information must be provided.

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Q21. \*Full Name - Last Name/Surname, First Name, Middle Name/Initial:

Phadke, Sayali, S

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Q23. \*Current Mailing Address:

261 Varsity lane, State College, PA 16803

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Q24. Permanent Mailing Address (if different than above):

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Q25. \*E-mail Address:

sayalip@psu.edu

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Q26. \*Primary Phone Number:

484-725-3868

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Q27. Secondary Phone Number (optional):

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Q28. Webpage (if applicable):

<http://sites.psu.edu/sayaliphadke/>

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Q7. \*Name and Location (city and state) of Home Institution:

Pennsylvania State University, State College, PA

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Q35. \*Academic Department:

Statistics

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Q33. \*Expected Degree (Bachelors, Masters, Ph.D, other):

**Q32. \*Major(s) and/or Minor(s):**

Major: Statistics Minor: Social Data Analytics

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**Q34. \*Expected Graduation Date (month and year):**

August 2019

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**Q31. \*Number of Credits Completed (including all credits anticipated to be completed by June 2017):**

50

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**Q29. \*Current GPA (on a 4.0 scale):**

3.43

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**Q44. \*Previous Degree(s) Received (Bachelors, Masters, Ph.D, Other, None), Institution(s), Date(s) and Field(s)/Major(s):**

- Bachelor of Arts; St. Xavier's College, Mumbai, India (University of Mumbai); May 2011; Double major Economics and Statistics - Young India Fellowship (no degree); Ashoka University (in collaboration with University of Pennsylvania); May 2012; Liberal Arts

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**Q8. Optional - Please describe your background (courses taken, research projects, etc.) in Statistics and Mathematics.**

- During undergraduate studies, I studied the required mathematics and statistics courses that included Linear Algebra, Analysis, Probability and Distributions, Sampling Theory, Operations Research, Design of Experiments, and Applied Statistics. Additionally, I took several extra courses as part of the Statistics honors program. These included methodological topics such as Market Research, Discriminant Analysis, and Game Theory. For an additional honors credit, during first year of the program, a classmate and I worked on an independent project to investigate the 'Popularity of Cellular Network Providers among College-youth'. We created the survey instrument, designed a stratified random sample, administered the questionnaire, and analyzed resulting data. - During my tenure as a Research Assistant, I audited Linear Algebra and Econometrics courses with the Fellow Program in Management students at the Indian School of Business - As a Research Assistant at the Applied Statistics and Computing lab (Indian School of Business), I worked with the Society for Elimination of Rural Poverty (Government of Andhra Pradesh, India). They collected baseline for 3.85 million Scheduled Caste and Scheduled Tribe households. It included data on demographics, various human development indicators, access to government schemes, assets, and credit history. As the senior-most researcher departing in two months, I worked on the initial setup of the project; meeting with the representatives, performing initial data pull from their server, overseeing exploratory analysis conducted by the new RAs, and creating a modelling plan to address the key questions posed by their team. This process of understanding the larger research questions and finding the best way to address them using available data was a valuable learning experience, and helped me realize the role a statistician can play in the process.

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**Q43. Optional - Describe your background (courses taken, research projects, etc.) in social and behavioral sciences.**

During my double major, I took the required Economics courses that included Micro Economics, Macro Economics, Growth and Development, Advanced Economics Theory, and Financial Systems. In addition to those, I took several social science classes as part of the Young India Fellowship program. This was a one year post graduate liberal arts and leadership program. We studied Sociological Reasoning; Gandhi's Critique of Modernity; Media, Culture and Globalization; Reason and the Making of Modern India; Economics and Public Policy, and Anthropology, during the course of this year.

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**Q42. Optional - Describe your background in programming.**

I have coded extensively in R for the past four and a half years. In addition to conducting analysis using existing packages, I have written simulations and other user-defined analyses. I am comfortable accessing data on server using SQL, and have conducted large analyses on Penn State's High Performance Computing Cluster.

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**Q41. Optional - Provide information about other significant courses you have taken within your field of study.**

- Social and Political Networks, Department of Political Science, Penn State University, Spring 2016 – For the final project, I analysed data collected from an online dating website, using the Exponential Random Graph Model (ERGM). - Foundations in Causal Analysis in the Social Sciences, Department of Sociology and Demography, Penn State University, Fall 2016 - Big Social Data, Penn State University, Spring 2016 – A course dedicated to understanding the process of, and learning about the tools and technology involved in collection and storage of big social data - Social Data Analytics, Penn State University, Fall 2016 – A course dedicated to discussing cutting-edge methods used in social science research, to analyze big data

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**Q40. Optional- Provide a brief description of any prior research experience.**

- Research Assistant, Applied Statistics and Computing Lab, Indian School of Business, Hyderabad, India -- Research assistance for a project on Causal Inference with observational data and its applications to social sciences, undertaken by the faculty affiliated with the lab -- Various assignments to provide methodological and data analysis support to faculty members, researchers and administrative units of Indian School of Business -- Research project to study the performance of family businesses in India -- Support towards analyzing data collected from participants of the Fifth Annual Conference on Family Businesses -- Statistical support to the Dean's office. Helped them draw insights based on the feedback provided by students and other stakeholders, on an ongoing basis -- Teaching support towards the Certificate Program in Business Analytics courses as well as PhD courses offered by the lab - White paper on family businesses in India -- Co-authored 'Family Business Performance and Survival through Macroeconomic Crises - A Study on Post-Economic Liberalization Era in India' with Professor Kavil Ramachandran (Indian School of Business) and other researchers -- Analyzed data of top 500 listed companies (by Market Capitalization) for each year from 1992 to 2011 -- Built an unbalanced panel data model with time fixed effect and firm random effect, to explain the Profit after Tax (PAT) using key financial indicators of the firm -- Evaluated multiple models based on the behavior of residuals and the collinearity diagnostics -- Investigated year fixed effects, effects of various financial crises and effects of 2 decades under study -- Tested for the effects of firm features such as ownership type, industry and region of operation

**Q49. Please upload your resume and one-page cover letter stating why you want to work for SDAL. These documents must be uploaded as a single file.**

[Sayali\\_Phadke\\_DSPG\\_2016.pdf](#)

383.6KB

application/pdf

**Q15.**

**\*Please make sure the following documents are emailed to Kim Lyman at [klyman@vbi.vt.edu](mailto:klyman@vbi.vt.edu) OR mailed to Social & Decision Analytics Lab, Attn: Kim Lyman, 900 N. Glebe Road, Arlington, VA 22203:**

**(i) Two letters of recommendation sent from references (teachers, mentors, or employers).**

**(ii) An original transcript sent directly from the academic institution. *Note: Transcripts that are issued directly to students and then forwarded to SDAL are not acceptable. SDAL cannot accept faxed or photocopied transcripts.***

**Q7. Assurances - I am willing to devote full attention to the Summer Fellow Program and participate in all activities.**

☒ Yes, I understand and accept all of these requirements.

☐ No

**Location Data**

**Location:** [\(40.797500610352, -77.902099609375\)](#)

**Source:** GeoIP Estimation

