

Diversity Statement

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I had the opportunity to work under the tutelage of Nandita Dukkhipati at Google Inc., Marshini Chetty at Georgia Tech, and Jennifer Rexford at Princeton University. The experience was enlightening as it enriched my perspective for research and advising. It also helped me appreciate the importance of diversity in science and engineering. Unfortunately, given the low representation of women in these fields, I believe mine was a very privileged experience. I am committed to achieving equity and enhancing diversity in science and engineering areas—ensuring that the representation of not only women but also other minority groups is reflective of current times.

Teaching & Advising. As a graduate student, I have had the opportunity to mentor two junior female graduate students. The experience helped me to recognize the barriers faced by women and other minorities engaging in computer science. As a faculty, I will be sensitive to these problems and create an environment of inclusion in my classes and research group where students from different background feel welcomed and can make progress. I will also actively recruit and train female and minority students in my area and help organize mentoring workshops to encourage them to pursue careers in STEM fields.

Volunteering. I will be working as a volunteer to the newly started program, *AI4All*, at Princeton University. The goal of this program is to increase diversity and inclusion in AI development, policy, and research. This year the plan is to host around 20–30 high school students, belonging to different racial minorities, in summer for 2–3 weeks. I plan to contribute to curriculum development for this program by adding a project that makes use of our *smart-home lab*, a dedicated house with all the state-of-the-art IoT devices, that I helped set up with my advisor Nick Feamster at Princeton University.

Currently, the program has an acceptance rate of around ten percent. The low acceptance rate is attributable to the overhead of hosting students for the duration of this program. I believe to achieve the stated goal, *i.e.*, AI for all, improving the outreach of this program is critical. In the future, I plan to use my expertise in designing massive online courses, to develop an online version of this program to reach out to underrepresented student groups in remote locations.

Workforce Retraining. Re-educating the workforce ensuring that they can catch up with the fast pace of technological development is of paramount importance in current times. Networking area is an excellent example of how the nature of jobs evolves with time. Conventional networking job required a deep understanding of multiple complex networking protocols. In contrast, many networking jobs now require expertise in programming languages and software engineering instead.

In the past, I contributed to an online course on *software-defined networking*. It provided me with an opportunity to reach out to tens of thousands of students from different age groups and with diverse backgrounds. Many of them were mid-career networking employees honing their skills to embrace the changing ecosystem, *i.e.*, shift to automated programmable networking. Being able to contribute to such a massive workforce retraining was a gratifying experience for me. In future, I plan to continue developing new courses that can contribute to such large-scale workforce retraining efforts.

Research. I grew up in a developing country where I had the first-hand experience of poor Internet connectivity and its social and economic implications. In my research, I tried to answer the questions of what are the technology and policy issues that contribute to sparse connectivity in the developing regions. More specifically, I conducted a measurement study to understand why the state of interconnections is weak in the African subcontinent, in spite of the presence of various Internet exchange points (IXPs), that revolutionized interconnectivity in Europe. I worked with researchers from a policy think-tank in South Africa (Research ICT Africa) for this project. Our efforts helped raise awareness about the state of interconnectivity in the region and encouraged adoption of best practices at local IXPs.

For my interconnection study, we used the BISmark tool, deployed at few home networks in South Africa and Kenya. It only supports a limited set of telemetry queries—restricting the nature of questions we could answer. In the future, I plan to design a cheaper version of *Sonata* for home networks that can be widely deployed in developing countries to answer a richer set of queries—driving policy decisions in the region.