To,
The Hiring Manager
Berkeley Lab
Bay Area, California, US

As a master's student in my second year of the program at Michigan State University majoring in Computer Science with focus on Artificial Intelligence and Deep Learning, I am extremely interested in your Project 3, Multi-agent Reinforcement Learning for Optimizing in Wireless Networks. The project abstract talks about exploring traffic engineering and its impacts on change from wired to a wireless network. Furthermore, about evaluating the extensions of MARL, where my interest and work in AI and ML can be used in understanding how will MARL work on wired (stationary) and wireless (non-stationary) networks and its impacts.

The project abstract also talks about building models of the wireless networks and simulating it on ns3 to learn optimal connectivity patterns that are reliable. Although I have not had a chance to work on a simulating project on ns3, my coursework required to simulate the basic routing algorithms, so, I do have lab experience with network simulation. I also have worked on a project where I analyzed and evaluated network packets of WhatsApp traffic. The packets were captured using Wireshark as a pcap file. My intention with this project was to assess the probable network threats of the network model.

I am interested in this project because the work in MARL entices me. The goal of learning a policy that maximizes reward with a multi-agent setting is quite challenging because of the underlying fact that every agent's reaction will be dynamic (changeable policies) and will have stochasticity. Working on a project to develop an efficient way of traffic engineering using these concepts piques my curiosity and under the mentorship of researchers at Berkeley Lab will give me the proper exposure and guidance to work on the project while working towards the vision of the project and developing my skills.

Please refer to my resume for my projects and background. I'd love to talk with you more about my technical abilities, my interests and skills.

Sincerely,
Namratha Shah