Justification Document for Shared Student Computing Resources for Software Engineering.

The Need:

Software engineering education must evolve to prepare our students for the work they will do in the future. As the founder and four year leader of the University of Missouri's Masters in Data Science, I know all too well the severe limitations of having students attempt software engineering without a common server environment to work with, both individually and on teams. Specifically:

1. More time is spent learning how to configure python, PostgreSQL, Flaks, Hyperledger/Indy, and git on the individually nuanced operating systems students bring with them to class. Instead of focusing on team oriented problem solving, my TA's and I are solving infinite, minute local configuration issues.
2. Students are better able to help each other learn, recognizing the wide range of experience actually performing software development outside of class that is, frankly, an assumption we all make.

The Approach:

My TA and I will cover core software engineering materials this semester using weekly projects that compel students to learn the core curriculum of software engineering through practice instead of lectures. Computing resources like those requested, are essential and otherwise unavailable to me.