



Whittier
College

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University of Michigan Department of Physics,
Summer REU Program

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Greetings,

My name is Jordan Hanson, and I am an assistant professor of physics at Whittier College, in Whittier, California. I write in support of Cassady Smith for the summer research programs at the University of Michigan summer REU program. Cassady Smith has been my physics student in my introduction to mechanics course, and is currently a physics major in our program. Cassady and I are working together on several projects.

My research focuses on the ARIANNA project (<https://arianna.ps.uci.edu>), and Cassady became interested early this semester. She and I have traveled to UC Irvine, where I helped to start the ARIANNA project as a graduate student. She has begun to help me reprogram some of the key simulation software associated with the experiment. She has been a fast learner in that regard, gaining experience with python3 and C++. I know that she is also taking computer programming this semester and is getting high marks. Additionally, she is taking a new course taught by me this semester, entitled Computer Logic and Digital Circuit Design.

Secondly, Cassady has been helping me launch a digital textbook intended to prepare high school students for college STEM classes. The project is in the early stages, however, she has provided example code that I may use to include in the final project. We intend to use machine learning to tailor the digital text to the individual student, and Cassady has created python modules to assist me with this. We have recently secured an internal grant together from the Digital Liberal Arts foundation at Whittier College to aid in this project's development.

In summary, I recommend Cassady for your program. She is a young but fast learner. She is both organized and efficient, and has been a great help to me.

Sincerely,

Jordan C. Hanson, PhD