Need CSC Research Credit?

The Short Version

I am looking for a graduate or undergraduate computer science student with a working knowledge of first-order predicate logic to write a basic “logic formula editor” this fall. For this project, working with Dr. James Blackmon in collaboration with Professor Kaz Okada, you would get 3 units of credit in a CSC 898 (or CSC 699, if you are an undergrad).

The Job

The formula editor would be designed so that any input supplied by a user must be given in accordance with the rules of formation for first-order predicate logic. In other words, the logic editor will not accept anything but a well-formed formula (WFF) of predicate logic. This requires creating input fields and providing displayed output that often includes more input fields—or doing something equivalent to that, if you end up seeing a better way. This capacity must be recursive so that more complex WFFs can be composed of other WFFs. Users would need to be able to form arguments with the WFFs they create, and to write their English interpretations. The final product should also look fairly attractive and professional, as it may count as a “proof of concept” for a larger project.

To specify the core task, I will provide a table (with about a dozen rows) that covers all possible input options (mainly using buttons) and their output formats, which often include further embedded input fields which are open to some of the same input options.

About Me and the Broader Project

I am an analytic philosopher who teaches courses such as Phil 621: Minds, Brains, and Computers and Phil 395: Ethical Issues in Science and Technology as a lecturer in the Philosophy Department. My overall goal here is to create an online system that can both teach and utilize deductive logic. As a result, people would have a tool for thinking more critically and reasoning more productively. Your work would play into this broader, more ambitious project—at least as a proof of concept, possibly as an integral part.

Please contact Dr. James Blackmon by September 8, at blackmon@sfsu.edu, and put “Logic Editor” in the subject line.