Abstract

In the field of formal verification, the use of abstract data structure is very common, many of these data structures such as finite state machine can be modeled using a graph. While graph models can be very helpful in understanding the data, they can only be used alongside the support tool that produces the visualization. For both novice and expert verification tool users, it is not uncommon to be experimenting with several different verification tools. It is common for these tools to produce text-based outputs without providing its users with any visualizations to aid understanding. A web framework for showcasing such tools is proposed in this dissertation. The framework features a user-facing interface for displaying an interactive graph visualization produced by the verification tools with the ability for the user to input source code or select from sample sources. The interface also features pathfinding and layered data exploration. The verification developer is capable of easily integrate their verification tools with the backend of the framework using flexible configurations that define both the frontend and backend behaviors, integrated within a Docker container for portability giving the ability to showcase the tools on any host.