**HackStak**

Ashley Coleman, Kyle Eisenbarger, Dalton Hahn, Alex Todd

Department of Computer Science

**Background & Purpose**

For the past year, Kansas State University has hosted a Hackathon event within the Engineering Building. Hackathons are normally weekend long events where participants spend anywhere from 24-48 hours developing a new piece of software or hardware that they present upon at the end of the weekend. There are many challenges faced by the organizers of this event, from registering participants, to planning and organizing an entire weekend’s worth of food for over 200 people. In order to take some of the stress and planning off of Hackathon organizers at Kansas State and at other participating schools, we developed HackStak. HackStak is an end-to-end framework for Hackathon planning, management, and execution.

**Results**

In order to create HackStak, we utilized many different tools and languages to accomplish our goal. When creating the web application we utilized Laravel, a web framework, that allowed us to condense files into Models, Views, and Controllers for easier file and software management. In order to serve the webpage, we used the Apache2 engine and in order to store user data and maintain information about the Hackathons, a MySQL server was used.

One of the goals we hope to accomplish for HackStak is to market our tool to other Hackathon organizers and advocate for adoption of our framework. We believe that HackStak is a great tool that combines many of the small tools that organizers already utilize to operate their Hackathons. In order to show the usefulness of our tool and advocate for greater adoption, we have been attending and participating in Hackathons throughout the year and discussing the benefits and features of our framework. Also, when we have polished and added the features we have outlined, we will present the framework as a tool to Major League Hacking which is the overarching Hackathon organization. Major League Hacking sponsors and helps to organize Hackathons at schools around the country. Hopefully, Major League Hacking will adopt our project and advocate for Hackathon organizers to use our tool from the conception of their events.

**Conclusion**

By creating an end-to-end framework for organizing, planning, and executing Hackathon events, we feel like we have contributed greatly to the Hackathon culture. Providing organizers with better tools to make and organize their Hackathons, we’ve allowed them to spend more time doing what is important at Hackathons: spending time with the participants and helping to create great and meaningful hacks.

**Recommendations for Future Work**

While we feel that our work on HackStak is very complete and that we have created a very robust and complete framework, there is still a large amount of room for improvements and features to be implemented. One such improvement we hope to make is Slack integration. Slack is an instant messaging service that is frequently used by Hackathons in order to alert the participants about updates and events throughout the weekend. By integrating the schedules and messages posted to HackStak into Slack, it would streamline announcements and updates for event organizers. Also, in the future we hope to implement Android and iOS applications for organizers so that they may post updates, make adjustments to budgets, etc. directly from their mobile phone.