Summer Programming Camps Workshop

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1   Introduction

Summer programming camps have been established in urban areas for quite some time now, but there is a great need for them in rural and suburban areas. These camps must be self-sustaining and provide an experience that combines fun and learning. Camp leaders can create a social environment where those who participate feel welcome, regardless of their background. By focusing on "gamification," along with social interaction, we can create a place of belonging that might not exist anywhere else. Summer camp is about much more than just offering programming skills to interested students. It is about creating an experience that the camper, as well as their parents, will remember.

In this workshop, we will give specific logistical and practical examples, based on years of experience, of how to plan and implement a week-long summer programming camp. We will show how to successfully "gamify" the camp, using tools such as a leaderboard, mini-competitions, and other games to keep campers positively motivated throughout the week. We will also talk about how to implement outdoor activities that encourage participation by all campers and help increase social belonging. We will discuss several programming languages covered in our camp and how each builds upon one another. Participants will receive a sample planning checklist, an outline of the suggested activities, techniques to recruit volunteers, and tips on how to make the camp self-sustaining. This workshop will help prospective camp leaders of all ages to create their camp successfully.

The goal of this workshop is to share experiences with other educators who are interested in creating their camp. The workshop will cover the logistics of creating and running a successful camp in their area. Attendees will get hands-on experience working with an expert who has run a camp for over seven years in rural Montana learning how to not only run the camp but also understand the logistics of creating a camp that is self-sustaining while using local vendors and involving the community. Attendees will also create a network and collaborate with other educators and share ideas. Attendees will also have access to their version of an online web system that visually tracks the gamification aspect of their camp. The turn key system will be free of charge to all attendees so that they can have a web-based system without having to either create it on their own or pay for another developer to create it for them. Historical experiences will be shared including what has worked well and what pitfalls to avoid with all who attend the workshop with the

goal of being as successful as possible right from the beginning. Finally, those in attendance will have a chance to present their curriculum with the larger group continuing the goal of sharing everything with all those who attend.

2   Expected audience

Late secondary and early post-secondary CS educators who are interested in starting a camp or exploring how to expand their current offering. Since this is the first offering of this specific workshop, we expect anywhere from 15-30 people to be interested.

3   Space and Enrollment restrictions

Enrollment could be limited to 30, with six teams of 5 interacting with one another.

4   Take away skills

Attendees of this workshop should be able to successfully start and run a gaming programming camp focused on middle school aged students. They should be able to prepare, market, and garner interest from students from a wider geographical location. Attendees will also be able to teach the programming languages that are introduced in the workshop. They will have an opportunity to learn up to seven different programming languages and determine which ones they will incorporate into their camp. Finally, those in attendance will learn how to run the end of camp showcase that displays the student's work for their parents, guardians, and friends.

5   Audio/Visual and Computer requirements

Ideally, participants will have wireless internet access and laptop power at each seat as these tools would help facilitate the participants when creating their mini-camps. We will also need a digital projector (for presenters). Support for Windows and Mac laptops are essential. Laptop Required: All participants will need a laptop for creating and storing their mini-camp and for creating their camp web portal.

6   The expertise of Presenter

Michael Cassens holds a Masters in Computer Science from the University of Montana and has been running summer camps for middle school and high school students over the last seven years. His camps often have maximum enrollment along with waiting lists. He was instrumental in starting one of the first summer camps of this kind in the state of Montana, bringing more computer science education to young people. He continues to adapt and evolve his camps to meet the needs of new and return campers alike. He looks forward to talking to others in rural and suburban areas who are interested in starting their camp and hopes to share and collaborate with anyone who is interested.