Can you animate computer programming?

Mason Isaac Ginter

Student

Business and Computer Science Department

Gateway Community College

New Haven, CT

Email: mgint0002@mail.ct.edu

Omar Ndao

Student

Business and Computer Science Department

Gateway Community College

New Haven, CT

Email: ondao0001@mail.ct.edu

Mirco Speretta

Assistant Professor

Business and Computer Science Department

Gateway Community College

New Haven, CT

Email: msperetta@gatewayct.edu

Abstract

Purpose and Objectives

Computer programming can be challenging to learn because it involves logic and abstract structures. With the addition of visual programming environments such as Scratch and Alice, training in Computer Science is growing. On the other hand, research has also shown that some students do not find these tools effective.

We propose to narrow this gap by using “visual aids” to support the hands-on experience of computer programming. We believe that the visual representation of abstract concepts such as functions, loops, and variables will greatly support the understanding of the core programming concepts.

Materials/Methods,

We are going to start building a visual aid library by asking college students to create their own visual animation of a programming concept using the Python's turtle library. These sets of animations will be put into web pages that will be shared with local highschool students on social media. We plan to use our computer education to open up Computer Science as a whole to a new generation of students, this also means involving schools across the state in order to share the idea that computer science can be learned by anyone.

Conclusions

We are currently putting together all the submissions into a webpage that will be shared via social media. We will then use a survey to collect data that will help us assess the

effectiveness of our approach. Students will be able to pick their favorite animation and rate the effectiveness of all the animations overall.