sdmay18-04: Physical Character Animation using Machine Learning
Spring Report 6
March 24 - April 6

Team Members

Rob Quinn — *Project lead, Sim lead programmer, client communications*
Joe Sogard — *Web lead, Backend programmer*
Joe Kuczek — *Full stack web, SCRUM master*
Luke Oetken — *Simulation programmer, Machine Learning, Status reporter*
Andrew McKeighan — *Simulation programmer*
Kenneth Black — *Simulation programmer, Machine Learning*

Summary of Progress this Report

This week our team continued development of the communication protocol between the simulation and the website, and tested various methods in order for the website to receive data in the optimal way. The website front-end was also refactored to improve readability and maintainability. The simulation engineers continued tweaking the genetic algorithm for better simulation results, as well as working on improving the stability of large characters with physics. We also created and started work on a new Unity game project to demonstrate the use of trained animal movements as character animations in games, which is our project's main end goal.

Pending Issues

We have researched a few different ways of converting animal movements from the simulation to animations that can be used in Unity, however we are not yet sure which method we will use.

Plans for Upcoming Reporting Period

In the next report period we plan to finish and test the communication between the simulation and the website, and ensure data is displayed as expected. We will also focus on completing our example game using the simulated animal movements as character animations.

Individual Contributions

Team Member	Contribution	Bi-Weekly Hours	Total Hours
Rob Quinn	Improved stability of large characters with physics	6	70

Joe Sogard	Made final decision regarding automated testing of REST API. Worked on documentation of API. Researched communication between C# program and web requests.	4	66
Joe Kuczek	Refactored front-end code to ensure it was readable and maintainable. Researched resource bundling methods including Webpack and Grunt.	6	59
Luke Oetken	Started work on example game to use simulated locomotion as character animations	4	70
Andrew McKeighan		0	50
Kenneth Black	Finishing up gene mutation changes. Going to merge with rest of group next.	4	56