

sdmay18-04: Animal Locomotion and Behavior Simulated by Genetic Algorithms

Week 6 Report

October 17 - October 23

Team Members

Rob Quinn — *Project lead, Sim lead programmer, client communications*

Luke Oetken — *Simulation programmer, Status reporter*

Andrew McKeighan — *Simulation programmer*

Joe Kuczek — *Full stack web, SCRUM master*

Joe Sogard — *Web lead, Backend programmer*

Kenneth Black — *Simulation programmer, Machine Learning*

Summary of Progress this Report

This past week, our team members all worked on the individual assignments we discussed at our last meeting. The simulation engineers made progress with upgrading the prototype to new tools and frameworks, and learned more about how we will design new animal models. The web engineers completed a website prototype, and worked on setting up the database we will use for the project.

Pending Issues

The web engineers ran into some permissions issues setting up the database, however these were resolved by the end of the week.

Plans for Upcoming Reporting Period

The simulation engineers will continue working on implementing the ml-agents machine learning framework into the project, and designing new animal and muscle physics models. The web engineers will continue working on implementing the planned database and designing the project website.

Individual Contributions

| Team Member | Contribution | Weekly Hours | Total Hours |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|
| Rob Quinn | upgrading and testing with the new Unity 2017.1 | 2 | 27 |
| Luke Oetken | Got machine learning environment and ml-agents examples working on Mac, looked into how to convert current prototype to ml-agents environment. | 3 | 26 |
| Andrew McKeighan | working on creating fitness class. Researching scriptable objects. | 3 | 20 |
| Joe Kuczek | got basic web files on Git, helped with mapping database | 2 | 19 |
| Joe Sogard | mapped out relational database for project | 2 | 18 |

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| Kenneth Black | I learned more about the mechanics of remy and how to apply his physics towards other animals. | 2 | 18 |
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