CS 6460 Project Proposal

Benjamin Wang

bwang421@gatech.edu

1 OVERVIEW

The main focus of my project will be centered around creating hands-on tutorial videos on YouTube to teach beginners how to accomplish tasks working with data.

I will be employing various techniques I've learned about throughout the course in order to improve knowledge transfer, viewer retention, and learner outcomes.

2 RELATED WORK

There is an endless list of content creators on YouTube providing wide-ranging videos in different formats to teach technical concepts to anyone that is interested. From Khan Academy providing hand-written style tutorials, to the recorded college lectures, there is no shortage of videos teaching underlying concepts.

What will my content contribute?

I've felt that despite the large amount of tutorials, many of them are not designed or optimized to be digested through a platform like YouTube, they are lacking in hands-on demonstrations involving realistic data and problems, and explanation of concepts are poorly glossed over leaving the viewer with a poor high-level understanding.

I hope to provide content which tries to address all of these issues.

3 CONTENT DESCRIPTION

My videos will have two tracks involving work being done on Python and Microsoft Excel, these videos will aim to be short and to the point (< 5 min), and completely self-contained so that learning a task from another video is not necessary, or if it is, a reference can easily be made tagging the necessary video.

I will be covering basic tasks at first such as environment setup, reading in files, string manipulation and regular expressions, and moving between data formats such as XML to JSON and vice versa.

Once I create these foundational videos, I will upload them to collect feedback from users and classmates. Based on the feedback, I will determine if I will continue building more content, improve the existing content, or supplement the content with technical videos to explain concepts such as data structures and algorithms.

4 DELIVERABLES

I will provide a YouTube channel hosting these videos, and organize videos into a playlist. My long-term goal is to have videos building on top of other videos such as **'How to scrap Yelp reviews and create your own recommendation system from scratch.'**, but due to the time frame of the class, I would be happy to at least complete all of the baseline videos covering basic skills to build familiarity.

5 CONTENT OUTLINE AND TASK LIST

5.1 Outline

What I lay out here is not set in stone, but I hope to see the content I create follow the general framework laid out here:

1. Introductory video
2. Setting up the environment
3. File processing and text manipulation
4. Regular expressions
5. Converting data formats
6. Dealing with images
7. Visualizing results
8. Finding patterns
9. Making predictions

Between each of these big topics, I will examine the feedback I receive and see where additional technical discussions can be made to explain what is going on 'under-the-hood' and behind the scenes to give learners a better understanding and intuition of the materials so they can go out on their own to accomplish tasks.

I also hope to provide small projects and quizzes at the end of each video to test their learning.

Below is the schedule I hope to follow, I've modeled each week as a 'Check-list' of the tasks I'm aiming to complete:

5.2 Week 7: March 1-7

1. Build course outline
2. Record outline items 1,2, and 3
3. Research video editing methods for multi-channel processing
4. Weekly Status Check

5.3 Week 8: March 8-14

1. Edit and publish outline items 1, 2, and 3
2. Seek out feedback from Piazza on items
3. Intermediate Milestone 1
4. Weekly Status Check

5.4 Week 9: March 15-21

1. Record, edit, publish outline 4 and 5
2. Examine YouTube analytics from items 1,2, and 3
3. Write report on conclusions drawn from data
4. Seek out feedback for items 4 and 5 based on earlier feedback
5. Weekly Status Check

5.5 Week 10: March 22-28

1. Good feedback and data: Continue creating content
2. Bad feedback and data: Rerecord, edit, and publish past items
3. Collect feedback again from past reviewers
4. Weekly Status Check

5.6 Week 11: March 29-April 4

1. Continue editing and recording next outline items (Depending on schedule)
2. Start some supplementary materials for past items
3. Examine and report on analytics collected for most recently published videos.
4. Examine past videos to see if any new trend or changes have occurred.
5. Weekly Status Check

5.7 Week 12: April 5-11

1. Continue with scheduled outline OR supplementary materials.
2. Intermediate Milestone 2
3. Weekly Status Check

5.8 Week 13: April 12-18

1. Complete and close outline items
2. Begin project report
3. Begin project presentation
4. Weekly Status Check

5.9 Week 14: April 19-25

1. Complete project report, presentation, and wrap up project.
2. Final Project Submission

6 CONCLUSION

With my main outline and objective decided, the next step is for me to obtain the necessary video editing knowledge to become familiar with the work so that I can efficiently churn out the content in a short period of time and gather feedback.

I will be spending the week learning how to use my recording software, recording multiple channels to different files i.e. screen cast, web cam, and tablet drawing, then learning how to edit them all into one video.