**Senior Project Weekly Status Report**

**Student Name: Jordan Jarvis Email: jorjar95@byui.edu**

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**Project Title: Computer Vision Boggle Solver**

**Team Members (if applicable): N/A**

**Project Description: A software which takes a camera feed of a boggle board and returns all possible combinations of words it could find.**

**Technologies Used: TenorFlow, Python, OpenCV, NumPy**

**GITHub URL: https://github.com/Jordan-m-jarvis/BoggleSolver**

**(Add MountainDad as collaborator)**

**Week 1: 9/19/20**

Overall Status (on-schedule, behind, ahead): On Schedule

Number of hours worked this week: 9

Total number of hours worked on the project thus far: 9

Number of total hours anticipated at completion: 130

Accomplishments: Generated Idea, Researched technical challenges, started planning out documents.

Challenges: Taking brainstormed ideas and selecting one that fits the criteria of the course.

Identifying which language to use.

Identifying which libraries to use.

Identifying the potential algorithms and techniques to use.

Plans / Goals for next week: Finish my proposal and come up with enough data to get started on the project.

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week): No SPED talk available.

Other comments for the instructor:

**Week 2: 9/26/20**

Overall Status (on-schedule, behind, ahead): On Schedule

Number of hours worked this week: 9

Total number of hours worked on the project thus far: 18

Number of total hours anticipated at completion: 130

Accomplishments: Proposal completed, brainstorming completed, technology and library research and choice completed.

Challenges: Trying to understand what will work well with other systems and APIs is very difficult when the project you plan to implement has so many moving parts.

Plans / Goals for next week: Get GitHub running and the initial steps going with design documents and class setup.

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week): No Sped talks on the SPED talk board. Please notify me if they are posted elsewhere.

Other comments for the instructor:

**Week 3: 10/03/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week: 12

Total number of hours worked on the project thus far:30

Number of total hours anticipated at completion:130

Accomplishments: Created colab notebook on google to power the object recognition model. Created a data-set of boggle boards with pictures and annotations on them. No GitHub yet, just experiments on the data-sets and attempting to get custom object recognition libraries running.

Challenges: Object recognition training takes around 25-40gb of ram when running. My laptop only has 16gb. I needed to tap into google colab to get enough ram and processing power to train the network. The problem is that sessions are only 1 hour long then you lose progress and have to restart. So I ruin the model for 55 min then download the partially trained model, then upload and continue training for another 55 min.

Plans / Goals for next week: Get gitHub up, put annotations and training data on github along with the trained or partially trained model and the code used to train the model. Get warp-affine working and a few filtering steps on the images taken from the webcam. Apply a grid and crop feature which takes the largest polygon and crops to it.

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week): I always struggled with grid layout not looking how I liked it. The SPED talk actually helped me understand why. Whenever I would make the grid I never added it to a smaller grid. Effectively I never figured out how to get it to automatically arrange in a way that I wanted it to

Other comments for the instructor:

**Week 4: 10/10/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week:

Total number of hours worked on the project thus far:

Number of total hours anticipated at completion:

Accomplishments:

Challenges:

Plans / Goals for next week:

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week):

Other comments for the instructor:

**Week 5: 10/17/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week:

Total number of hours worked on the project thus far:

Number of total hours anticipated at completion:

Accomplishments:

Challenges:

Plans / Goals for next week:

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week):

Other comments for the instructor:

**Week 6: 10/24/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week:

Total number of hours worked on the project thus far:

Number of total hours anticipated at completion:

Accomplishments:

Challenges:

Plans / Goals for next week:

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week):

Other comments for the instructor:

**Week 6: 10/31/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week:

Total number of hours worked on the project thus far:

Number of total hours anticipated at completion:

Accomplishments:

Challenges:

Plans / Goals for next week:

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week):

Other comments for the instructor:

**Week 8: 11/07/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week:

Total number of hours worked on the project thus far:

Number of total hours anticipated at completion:

Accomplishments:

Challenges:

Plans / Goals for next week:

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week):

Other comments for the instructor:

**Week 9: 11/14/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week:

Total number of hours worked on the project thus far:

Number of total hours anticipated at completion:

Accomplishments:

Challenges:

Plans / Goals for next week:

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week):

Other comments for the instructor:

**Week 10: 11/21/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week:

Total number of hours worked on the project thus far:

Number of total hours anticipated at completion:

Accomplishments:

Challenges:

Plans / Goals for next week:

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week):

Other comments for the instructor:

**Week 11: 11/28/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week:

Total number of hours worked on the project thus far:

Number of total hours anticipated at completion:

Accomplishments:

Challenges:

Plans / Goals for next week:

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week):

Other comments for the instructor:

**Week 12: 12/05/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week:

Total number of hours worked on the project thus far:

Number of total hours anticipated at completion:

Accomplishments:

Challenges:

Plans / Goals for next week:

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week):

Other comments for the instructor:

**Week 13: 12/12/20**

Overall Status (on-schedule, behind, ahead):

Number of hours worked this week:

Total number of hours worked on the project thus far:

Number of total hours anticipated at completion:

Accomplishments:

Challenges:

Plans / Goals for next week:

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week):

Other comments for the instructor: