

1.5 Problems

One of the main problems I will face is that many modern methods of image classification often require significant processing power or time to run. Furthermore, if the processing is to happen locally, then the speed of recognition may differ from device to device. One way of negating this would be to use an online service to perform the processing, thereby eliminating the bias per-device. There also may also be a cost involved if high processing power is needed. If the algorithm was to run locally, then possibly some kind of minimum processor requirements could be implemented, or a limiter on speed of classification, which could allow all devices to run at the same rate of recognition.

Another problem that could arise is the automation of the difficulty tiers. If the difficulty system is implemented using some kind of handicap, then that could require doing something like applying an image filter to some of the images to make them more difficult to recognise. Applying an image filter is something that can be easily done using many coding languages, and can generally be done in real-time, depending on the filter. However, automating this in a way that predictably affects difficulty is not an easy task, so research will be needed to find the most predictable handicap that can be automated and put into the code.

1.6 Timetable and Deliverables

1.6.1 Timetable

Tasks	Weeks																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Research																									
Review existing literature on image classification methods																									
Look for frameworks and languages best-suited for a web-based game																									
Compare viability of classification methods for use in a web-based game																									
Develop																									
Design GUI mock-up																									
Create rudimentary prototype game including basic difficulty tiers																									
Implement GUI design into prototype																									
Test and tweak difficulty levels																									
Evaluate																									
Perform analysis of win/loss rate for player																									
Document progress, findings and procedure in report																									

1.6.2 Deliverables

1. A prototype game
2. An interim report
3. A final project report
4. A final game
5. A demo presentation

1.7 Required Resources:

Text Editor
 Web Browser
 Development Computers
 GitHub
 Git
 MySQL