# Examining and Invigilating Distance & Online Courses using QuestionMark and Remote Online Invigilation

## Bob Fisher, School of Informatics

- **Online exams & invigilation - what Informatics does**

- **Other online & invigilation assessment options**

- **Cheating?**

DSTI Programme

3 years experience using QuestionMark and ProctorU

## Online Exams - What Informatics Does

- 2018/19: 5 courses, 55 students

- Exams via QuestionMark: University supported web service, times overlap with on-campus exams, same exam content, EASE access

- Invigilation via ProctorU external service: c. 20 GBP/student/hour, video and biometric monitoring, reports, support for online difficulties, online exam access preparation
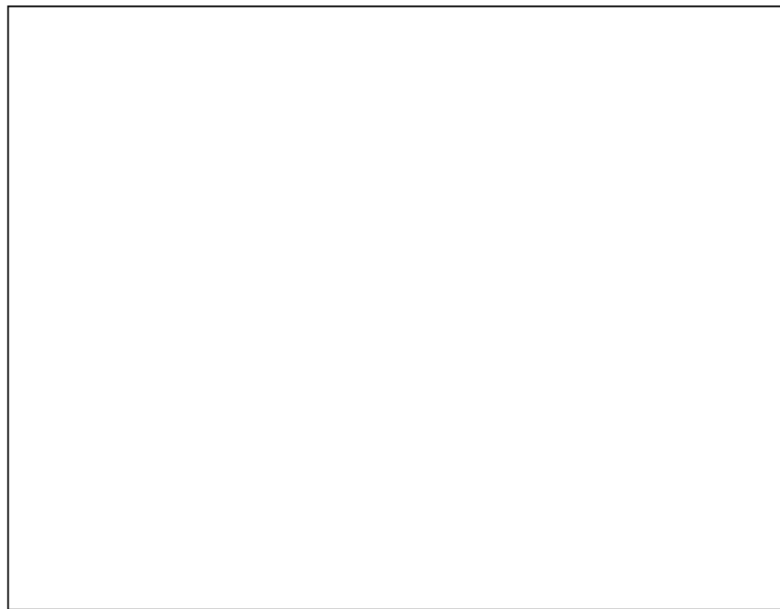
- Marking from printouts: downloaded word document
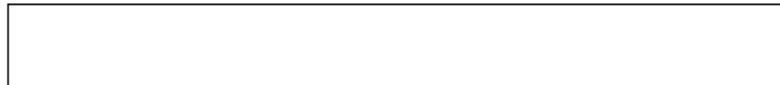
# Sample Exam View

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AV Sample Exam

Robert Fisher

**5.** **Q1d:** Why does using normalised RGB data help compensate for illumination variations? When would using normalised RGB make the problem harder?

**6.** **Q1e:** Think of the ball tracking example in the lecture. If you were only watching the ball fall, without observing any bounce or stopping, you would only need a simple state model. Is there any advantage to using the Condensation Tracking in this scenario? Why or why not?

# Sample Student Exam

## Coaching Report

| Participant ID | | Assessment outcome label | Feedback |
|---|---|---|---|
| Assessment name | AV Exam 1 2018-19 | | |

**Questions**

**1** Q1a

| Question wording | Q1a. Give five examples of representations (or outputs) that a deep net can compute when applied to one or more images, as discussed in the course. |
|---|---|
| Answer given | A deep net can perform multi-class classification, in which case it outputs a vector of probabilities for an image, one for each class, and the probabilities sum to 1.

It can also output a real number, such as the height of a person in the image.

It can output the optical flow at each pixel of the image.

It can output a label for each pixel for image segmentation. The label would correspond to a class for each pixel from a fixed set of classes, such as grass, pavement, sky etc in an outdoor scene.

It could output the image depth at each pixel. |

**2** Q1b

| Question wording | Q1b. Suppose you are building an inspection system for T shaped biscuits that are coming down a conveyor belt. You want to make sure that the edges of the biscuits are correctly formed (e.g. no |
|---|---|

# Other Question Types in QuestionMark

- Multiple choice: single or multiple answers

- Box fill in

- Click on answer

- Likert scale: strongly agree ... strongly disagree

- Ordering possible answers

- Graphical drag and drop

# Some Other Online Assessment Options

- **Learn**: Multiple choice, true/false, fill in blank, free text, and more

- **Turnitin**: PDF text input, review for plagiarism, some markup tools, fill in the box grading forms with score accumulation

## Online Invigilation: ProctorU

- Browser based, access QuestionMark at UoE by URL

- Browser & PC lockdown

- Video & audio monitoring

- Keyboard biometrics

- Webcam: initial room scan, face monitoring

- Screen monitoring

- Session recorded

- Passport ID verification

- 20 GBP/student/hour

# ProctorU Monitoring Screen

# Issues Encountered

- ProctorU or QuestionMark exam window timeout : use generous time windows

- Time zones and unsociable exam hours

- IS exam support (Saturday exams - IS is great so far)

- Dropout of internet connection (Board of Examiners)

- Text only (no formula editor or sketch input)

# How to cheat (see YouTube guides)

- Inspect HTML for answer

- Text sharing

- Notes on wall/hand

- Speak to others

- Substitute sitter

- Screen share

- Video glasses and ear speaker

ProctorU methods should catch these

# Other Online Invigilation Services

- ProctorExam - software product, needs service partner

- Oracle/Pearson VUE - online service

- Examity - online service

- Talview - online service

- Pearson VUE - big scale exams (1000s of students), at exam centres

**Questions?**

## More on Online Exams and Invigilation

- Online Proctoring is Trending: Here is All You Should Know About It; Joe, 2019, `https://blog.talview.com/a-complete-guide-to-online-remote-proctoring`

- Online cheating and countermeasures; Reena Ghosh, 2015, `http://certmag.com/online-certification-testing-growing-popularity/`

- A TEST OF INTEGRITY: REMOTE PROCTORING IN AN ONLINE CLASS; Cochran, Troboy, Cole (2010) `https://www.atu.edu/jbao/fall2010/ACTEB_Articles/CochranATestOfIntegrityJBAOFall2010.pdf`