STATS 220: Some Lessons Learned about Web-Based Teaching

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Introduction

- Course Overview
- Why Web-Based?
- Tour of STATS 220 Web Site
- Successes & Failures
- Some other stuff

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- Computer technologies for entering, storing, retrieving, and processing data
- Introduction to computer languages
- Awareness of potential gains from electronic storage and automation of tasks
- Nudge from computer user towards computer programmer

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- HTML
- XML
- Databases
- SQL
- PHP
- Regular Expressions
- Two lectures and one lab per week

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- Distance-learning, self-paced learning: only time students have to attend campus is for test and exam
- Electronic submission: standardisation of submissions; automation of marking
- Efficiency of communication: electronic notices and announcements; electronic resources; availability of course material
- Students do not need to install any software: only assume browser, text editor[, internet connection]
- Scalability

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Why not Cecil?

- Lack of flexibility (especially for on-line assessment)
- Needed a database server anyway
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Tour of the STATS 220 Website

... via Internet Explorer ...

Successes

- Low tree consumption
- Distance/self-paced learning
- Automated marking
- Checking for copying

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Non-Successes

- If the network goes down, nothing works!
- Lack of submission feedback
- Lack of feedback from automated marking
- Providing "target" answers that were not "model" answers
- Standardising/advertising the submission routine

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SECURITY Issues

There are two main issues:
(i) only allowing access to enrolled students
(ii) limiting the damage that enrolled students can do

- Password access for class to certain areas
- Password access for inidividuals to certain areas
- Isolating `stat18`
- Students dropping files onto `stat18`
- Students dropping files onto `stat18` and running them

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- PHP scripts
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Relevance to Other Courses

- Standard format for submissions
- Automated marking for code submissions
- An R practice page?

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Looking Ahead

- Making electronic resources available after the exam.
- More serious security (e.g., Secure Sockets Layer?)
- Modularising PHP scripts (maintenance and reuse)
- MIT's DSpace software (`http://dspace.org/index.html`): "DSpace is an open source software platform that enables institutions to: capture and describe digital works using a submission workflow module; distribute an institution's digital works over the web through a search and retrieval system; preserve digital works over the long term"

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