FALL 2018 - STAT 452 D100
STATISTICAL LEARNING AND PREDICTION (3)

Class Number: 4648   Delivery Method: In Person

COURSE TIMES + LOCATION:

Mo 9:30 AM – 10:20 AM
SSCK 9500, Burnaby

We, Fr 9:30 AM – 10:20 AM
SSCK 9500, Burnaby

EXAM TIMES + LOCATION:

Dec 12, 2018
12:00 PM – 3:00 PM
SWH 10081, Burnaby

INSTRUCTOR:

Brad McNeney
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Office: SC-K10565

PREREQUISITES:

STAT 302 or STAT 305 or STAT 350 or BUEC 333 or equivalent.

Description

CALENDAR DESCRIPTION:

An introduction to the essential modern supervised and unsupervised statistical learning methods. Topics include review of linear regression, classification, statistical error measurement, flexible regression and classification methods, clustering and dimension reduction. Quantitative.

COURSE DETAILS:
Outline:

1. Statistical Learning and Prediction
2. Measuring prediction error
3. Linear regression essentials and extensions
4. Classification: Predicting categorical data
5. Variable selection in linear regression
6. Non-linear regression methods
7. Trees and ensembles
8. Additional modern prediction methods
9. Unsupervised learning: clustering and dimension reduction

Grading

Assignments	30%
Midterm	30%
Final Exam	40%

NOTES:
Above grading is subject to change.

Materials

RECOMMENDED READING:

An Introduction to Statistical Learning with Applications in R. Gareth James, Daniela Witten, Trevor Hastie and Robert Tibshirani (2013). New York: Springer.

Available on-line through the SFU Libarary
ISBN-13: 978-1461471370.

DEPARTMENT UNDERGRADUATE NOTES:

Students with Disabilites:
Students requiring accommodations as a result of disability must contact the Centre for Accessible Learning 778-782-3112 or csdo@sfu.ca

Tutor Requests:
Students looking for a Tutor should visit http://www.stat.sfu.ca/teaching/need-a-tutor-.html. We accept no responsibility for the consequences of any actions taken related to tutors.

REGISTRAR NOTES:

SFU's Academic Integrity web site http://students.sfu.ca/academicintegrity.html is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. http://www.sfu.ca/policies/gazette/student/s10-01.html

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