COMPETING IN A
DATA-DRIVEN DIGITAL AGE

IT Teaching Workshop — May 19th, 2017

GORDON BURTCHE
Assistant Professor
Information & Decision Sciences Department
Carlson School of Management
University of Minnesota
6240, Competing in a Data-Driven Age

Contemporary managers must understand how the convergence of mobility, analytics, social media, cloud computing, and embedded devices are transforming firms, industries, markets and society. Using the foundation of data-driven business analytics, this course provides tools and frameworks for competing in the digital age. Students will learn general state-of-the-art analytics skills in the context of new platform based business models, digital search, big-data, social networks, social media and open innovation that pervade competition in the digital age. These will include the fundamentals of predictive modeling, large scale A/B testing, social networks analysis and an exposure to the work-horse tools of data-driven classification and prediction to explore patterns in rich datasets (such as k-nearest neighbors, classification trees and the design of recommendation systems). While this course will use case studies in the digital domain, the methods taught here have a wide range of applicability across functions and verticals in modern business environments. Prereq: FT MBA student
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<th>DATE</th>
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What is Disruptive Innovation?  
HBR Article R15118-PDF-ENG  
Big Bang Disruption:  
HBR Article R15038-PDF-ENG | Stanford GSB Case M-347  
Clover Lead Advanced Search: UMN SOMACO Case |
Parker et al. Platform Revolution (Chapters 1 and 2)  
Platform Envelopment Strategic Management Journal | |
| Jan 30 (M) | Platform Competition (2): A Way Forward?           | 1st Group Assignment Posted (Pipes to Platforms)  
Group Voice/Thread Task Due (Jan 27) | Reading: Products to Platforms: Making the Leap: HBR Article R1604G-PDF-ENG  
Intuit Quickbooks: From Product to Platform, HBR Case 714433-PDF-ENG | |
| Feb 1 (W)   | Big Data & Business Analytics                     |                          | Reading: Are You Ready for the Era of "Big Data"?  
McKinsey & Co.  
Report on Big Data: Economic Intelligence Unit | |
| Feb 6 (M)   | Data Mining 101: Basic Algorithms for Exploration & Prediction |                          | Reading: Provost et al. Data Science for Business (Chapters 1 and 2) | |
Case: Air France Internet Marketing: Kotler Case K55-5194-PDF-ENG | |
| Feb 13 (M) | Digitization of Search & Display Advertising: Part 2 |                          | In-Class Exercise: CloverLeaf - Understanding Search Ranks  
In-Class Exercise: StarDigital - Evaluating an A/B Test | Star Digital – Assessing the Effectiveness of Display Advertising:  
Stanford GSB Case M-347  
Clover Lead Advanced Search: UMN SOMACO Case |
| Feb 15 (W) | Social Media & Networks: Part 1 – Peer Influence & Social Networks |                          | 2nd Group Assignment Due (Air France)  
3rd Group Assignment Posted (Social Networks) | Do Your Friends Make You Pay?  
Management Science  
Identifying Influential and Susceptible Members of Social Networks“  
Science Magazine |
| Feb 20 (M) | Social Media & Networks: Part 2 – The Social Enterprise and Mastering Freemium |                          | 3rd Group Assignment Due (Social Networks) | The Foss Flutes:  
HBS Case 511117-PDF-ENG  
High Now’s Freemium Consundrum:  
UMN SOMACO Case |
| Feb 22 (W) | Expanding the Boundary of the Firm: Crowdsourcing & Crowdfunding |                          | 3rd Group Assignment Due (Social Networks) | Using the Crowd as an Innovation Partner:  
HBR Article R1304C  
Tapping Into the Wisdom (and Wealth) of Crowds: BIT Report  
Case: Innocentive.com HBS Case 3-508-170. |
| Feb 27 (M) | New Business Models: Understanding the Collaborative Economy & the Blockchain |                          | 1st Group Assignment Due (Pipes to Platforms) | Sundararajan The Sharing Economy (Chapters 1 and 3)  
The Truth About Blockchain  
HBR Article R1701J  
Simple Economics of the Blockchain  
HBR Working Paper |
| Mar 1 (W)  | Review Class                                      |                          |                                                     | |
| Mar 6 (M)  | In-Class Final Exam (Cumulative)                  |                          |                                                     | |
EVALUATION

**Participation, 10%**

**Group Assignments, 45%**

**Midterm + Final Exam, 20% 25%**

Pipes to Platforms: This assignment will be posted before the third session of the class, in week 2, but it will not be due until the very end of the course. You will be asked to identify a business that is employing a “pipe” model that you feel would be ripe for transition to a “platform model.” You will be asked to describe the business model, the company’s market position and considerations for making such a transition. You will be asked to articulate ways that the business might proceed with a transition to a platform strategy, possible variants of such a strategy, important considerations, pricing and revenue, etc.

Air France Search: This assignment will be posted prior to our first session on digital search. The assignment itself pertains to digital search, and will be based on the Kellogg Air France Search case. You will be provided with a sample of data drawn from Air France’s sponsored search advertising campaigns, across various search engines, and asked to pick one search engine and offer some simple data-based insights for how the campaigns might be improved. No need to use R here, Excel and pivot tables and so forth will be sufficient, though you can of course feel free to get more advanced if you are comfortable doing so.

Social Network Analysis: In the final assignment, you will use Gephi, an open source tool for social network analysis that is freely downloadable and which runs on most computing platforms. You will be asked to construct/visualize a network based on the Twitter live stream, focusing on a hashtag of your choosing. You will be asked to plot the network, describe it, and answer a few questions about its composition, key players in the network, etc.
**ISSUES / CHANGES?**

**R vs. XLMiner vs. Something Else?**

Some students love R, some hate it; Many want a common toolset across the MBA program.

**Module on IT Privacy / Security:**

Eyeing two cases: Target Data Breach, Apple vs. FBI
Discussion of social engineering, cybersecurity generally.
Questions?

University of Minnesota
Twin Cities Campus

Gordon Burtch, Ph.D.
Assistant Professor

Information and Decision Science
Carlson School of Management
321 - 19th Avenue South
Room 3-368
Minneapolis, MN 55455

Cell: 215-688-3852
Fax: 612-626-1316
Email: gburtch@umn.edu