Welcome the Analytical Consulting Lab!

In the following pages, you will find candidate projects from sponsoring companies under the Analytical Consulting Lab (DECS 915) for Spring 2015.

The projects listed include working with actual company data, developing meaningful analytical models for managerial decision-making, and presenting results and recommendations to company executives. Most projects will require some level of Non-Disclosure Agreement (NDA) with the sponsoring company.

More information about the class can be found at its website: http://kellogg.northwestern.edu/faculty/walker/htm/acl/

Please feel free to contact me at 847 467 2148 or russell-walker@kellogg.northwestern.edu with any questions and interest.

Thanks for your interest.

Russell Walker, Ph.D.
Clinical Associate Professor
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LinkedIn
WWW.LinkedIn.Com

About the Project

LinkedIn Talent Solutions products are utilized by businesses of all sizes. Most of the fortune 500 firms leverage our tools to help them find great talent for their businesses. Many of the LinkedIn Talent Solutions (LTS) products are software as a service subscriptions that are renewed annually. LinkedIn has a team of relationship managers that focuses on strengthening client relationships and renewing business annually. However, we always have a set of smaller customers who do not find value from our product on annual basis. We would like to double-click on this set of customers to understand whether or not they do or could come back to our product. What should our “winback” strategy be? What is the lifetime value of our smallest customers, knowing that some of them may take “breaks” from our service?
FEW Spirits
WWW.FEWSPRIRITS.COM

About FEW Spirits
Founded as a dry community, Evanston was home to many influential advocates for Prohibition who effectively kept the city free of alcohol for more than one hundred years.

Though the city legalized drinking in the late Nineties, it took the perseverance of our Master Distiller, Paul Hletko, to reverse the antiquated liquor laws. With roots going back to some of Europe's fabled brewing families, Paul and FEW Spirits have marked the end of Evanston's Prohibition and given the city its very own craft distillery. FEW Spirits has won many awards for its novel take on small-batch gin, whiskey, and specialty spirits. The team will work with the partners on the project.

Project:

Over the past two quarters students have worked to help FEW Spirits build an inventory management model and a costing model. Now, FEW needs help with integrating the two models into a production planning model they already have. The result will be a integrated way of understanding its marketing plans and marketing costing structure. This quarter you will help create an analytical tool to help FEW take its knowledge about its future revenue, cost of production, and current production schedule to model out marketing budgets and timelines.
Zest Health  
www.zestHealth.com

As we are a growing startup, we move quite fast so it’s important that we provide you updated project briefs to further entice potential class participants during project selection. I have modified both the firm description + project descriptions submitted earlier for you to use and incorporate in the spring term. And given we’re talking a few months in advance, these descriptions are subject to change a bit since we will likely make quite a bit of progress on our own between now and then. Zest Health, a growing venture-backed mHealth startup located in downtown Chicago, is reinventing the way consumers experience healthcare and how employers pay for it. By focusing on preventative care and disease management, Zest is able to improve member well-being which ultimately makes for happier and healthier employees. Our business model is built around a cloud-based platform and accompanying mobile applications for iOS and Android that offer members access to information and help when they need it.

Project #1 - Financial scenario-planning

As we continue to grow and onboard additional employer customers, we would like to engage the student team to conduct their analysis and provide recommendations specific to potential financial scenarios as well as the development of additional ROI models. In particular, we are looking for the team to conduct sophisticated analyses that considers various customer segments, pricing schemes, sales approaches, and general forecasting. The data would originate from multiple sources, including our CRM, online medical databases and previous internal projections. The end result will help inform the decision-making and overall trajectory of the company.

Project #2 - Marketplace Business Operations

We are soft-launching and refining our medical marketplace offering throughout early 2015. We would like support from the student team in designing and refining our marketplace loyalty and economic model(s). This includes detailing out accountability and liability tied to revenue as well as earning, redemption and fulfillment vehicles.

Project #3 - Marketplace Customer Engagement

As we prepare to launch our marketplace offering, we would like the student team to analyze how we could best engage our members. This could include:

- Optimizing product mix (e.g. provider services) by analyzing both quantitative market research and real-time member data as it is received along with business development opportunities

- Building analytical reporting and visualization tools based on student-driven hypotheses to enhance operational efficiency, inform the product roadmap and offer additional data-driven insights
United Airlines
WWW.United.COM

Candidate Projects
There are multiple candidate projects with United Airlines and the Mileage Plus frequent flyer program. The projects will generally involve a study of customer redemption, reward use, search use and Internet tracking, new revenue creation, and partner involvement. The Mileage Plus program is an internationally recognized rewards program of premier status. Student teams will work on real projects, with real data, and present to senior executives. These projects are sponsored by executives in Mileage Plus, who have overseen previous ACL projects with Kellogg. Students may select from the below. Multiple projects with United are possible.

Project 1: FareLock Study
Review the financial impact of FareLock. Specifically, we’d like for the team to review the revenue associated with FareLock purchases, and the average price/availability on the flights where FareLock was purchased (to the extent we can get the data). Ultimately, we’re trying to determine:

- The demographics of a FareLock customer (MP status, leisure vs. business traveler, etc.)
- Purchase behavior (days from departure, booking class, likelihood of ticketing, etc.)
- Likelihood that the seat would have been purchased with/without a FareLock purchase
- Ideally, we’d like to include inventory spoilage implications, since these customers are holding inventory on flights without having purchased a ticket.

Project 2: A second project is forthcoming
Qantas Airways

www.qantas.com.au

Project Description:

Purpose: As a key input into Qantas & Jetstar network planning for the Australian domestic market, determine data-based elasticity approximations for the relationship between capacity changes in a given market and their effects on the RASK performance of carriers in that market.

Scope of Work:
- Review and analyse Qantas-provided historical data on capacity and RASK dynamics in the domestic market
- Isolate the correlation (regression analysis) between capacity change and RASK change, ideally by route or by type of route (subject to data availability)
- Based on the above, propose appropriate elasticity assumptions for effects of capacity change on Qantas, Virgin Australia, Jetstar & Tigerair Australia (a unique elasticity should be assumed for each carrier)

Deliverables:
- Summary of correlation analysis and findings
- Proposed elasticities for the four carriers on each of the most important domestic routes (as time and data allows) – e.g. SYD/MEL/BNE Triangle, SYD/MEL/BNE-ADL, East-West, representative leisure routes

Key Interfaces:
- Head of Qantas Group Strategy (primary)
- Manager of Qantas Group Strategy (primary)
- Head of Qantas Domestic Strategy
- Head of Qantas Domestic Network
- Head of Jetstar Network & Commercial

Confidentiality:
- Handling of data and sharing of findings would need to be treated with confidentiality (under an NDA)

Students will work with Reed Tanger, Head of Strategy, Kellogg MBA grad!
Menus of Change
www.MenusofChange.org

Project Descriptions
There are 2 projects available with Menus of Change. Each looks at a critical input to the world’s food supply. Risks associated with the use, availability, pricing, and environmental impact follow and will drive the risk-decision approach to the use of these food inputs.

Project 1: Sustainability, Transparency and Risk in the Food Industry
The food industry is at the intersection of some of the key risks impacting leading industries: Operational risk from climate and water constraints, reputational risk from poor labor and social conditions in supply chains, and financial risk from increasing volatility of key commodities. Some food companies are showing the strain on their bottom lines as supply chains grow more brittle while others are adopting new approaches that put transparency and corporate responsibility at the center of their strategies, creating vertically integrated “direct to farm” strategies like Mars and Starbucks which are investing in social development programs in key cocoa and coffee growing regions, Chipotle which selects the farmers its distributors and suppliers must work with, and others which are joining industry roundtables set up by global NGO’s like the World Wildlife Fund. While all show concern, this project is intended to determine what leading sustainable food and agriculture sourcing strategies may already be driving business success. The project would involve identifying a substantial universe of large US or global restaurant and consumer-facing food companies, probably publicly traded and with regular public reporting and correlate the types of supply chain transparency and sustainable sourcing strategies they use, if any, with their performance on key financial indicators (growth in shareholder value, revenue, profit) and also the rate of “surprises”, or unforeseen problems, in their supply chain that they announce to the markets.

Project 2: What Drives Meatier Returns or Less Meatier Returns
Much has been made in recent years about the environmental impact of meat and also the impact of climate change and water on meat and livestock production, including unprecedented cost increases and volatility. This comes at a time when a growing number of consumers are looking to increase the share of plant-based foods that eat, foregoing a meat for a few meals each week or seeking options that smaller amounts of meat. For instance, while McDonald’s is built around the quarter pounder, fast growing competitors like Five Guys feature a 1/8 pounder and Shake Shack and 1/2 mushroom patty and 1/2 beef double stack. New restaurant companies are being more overt, with companies like Chipotle, vc-backed Sweet Greens and Illinois own Roti Grille among the many that use meat as a condiment and offer a range of plant0-based options. Does the shift towards offers that feature more plants and a bit less meat. While that may match consumer values and also drive health and environmental benefits, what’s the impact on business performance. The project would involve identifying a set f plant-forward companies and compare
them to a set of legacy US or global restaurant and consumer-facing food companies, probably publicly traded and with regular public reporting and correlate their performance on key financial indicators (growth in shareholder value, revenue, profit) and also the rate of “surprises”, or unforeseen problems, in their supply chain that they announce to the markets.

This project is sponsored by Arlin Wasserman, a Founder and Director of the Menus of Change.
NorthShore Hospital

The NorthShore Center for Simulation and Innovation
www.NorthShore.org

About
The NorthShore Center for Simulation and Innovation (NCSI) at NorthShore University HealthSystem in Evanston, IL, recently expanded its simulation center to 13,000 square ft including 7 simulation rooms (2 fully operational trauma rooms, 3 patient rooms, and 2 operating rooms) and a surgical lab for advanced surgical training.

Our center is now in the top 5% nationally in terms of size for hospital-based simulation centers (ie not based directly on the campus of a medical school university campus) and our learner throughput is likely in the top 1% as we have 400-800 learners come through our center on any given month. We are multidisciplinary in nature with attendees from nursing, pre-hospital, medical students, residents in various fields, and attending physicians. As an institutionally based simulation center, our audience focuses more on "adult" learners (ie current practitioners - physicians and nurses) more than university-based medical school simulation centers who focus more on medical students and nursing students.

Candidate Projects are Below:

1. Creating the business case and operational workflow necessary to increase utilization of B-Line Simulation Management Software.
   a. This project would have the students working with our techs to determine the various components of the simulation management software that could be optimized. (For example, today, only a fraction of our users are actively engaged and using the system fully.)
   b. Project goals
      i. Decrease time/effort spent performing manual data entry by leveraging the simulation management software
      ii. Identifying ROI associated with technology upgrades to facilitate integration of B-line in workflows (iPads, kiosks)
      iii. Improving overall utilization of the system in both surgical and medical simulation - providing gap analysis of current functionality that is used vs. that which is under, or not utilized – and then identifying workplan to achieve integration.

2. Reviewing historical utilization rates by department/learner type, and identifying the correct allocation formula to achieve equitable distribution of expenses.
   a. Identify data sources – if data sources are not automated, identify mechanism to reduce manual workload associated with tabulating utilization
   b. Review yearly budget/financials, and identify potential allocation
back to departments – likely will need a few proposals given the political reality of non-revenue generating related expenses.

c. Review current utilization of the center
   i. Up-time
   ii. Down-time
   iii. Number of optimal FTE resources needed to staff center vs. how many resource employees are necessary

d. Given historical utilization, forecast the number of external courses needed for the center to break even in FY2014.
Element Bars
www.ElementBars.com

About
We are a custom energy bar company located in Chicago. This means that at http://www.ElementBars.com, customers can create their own custom energy bar by selecting from all natural and organic ingredients and then naming their own bar. Our whole food ingredients are carefully handpicked and kept as nature intended. Then we hand make our bars using the ingredients our customers choose, bake them in our ovens and deliver them freshly baked from our ovens to their doors. The Founder and CEO Jonathan Miller is a Kellogg alumnus from the Class of 2008. He has worked with several students from Kellogg – including hiring summer interns and serving as clients for other class projects. The Analytical Consulting Lab provides another great opportunity to provide students with rewarding experiences while allowing Element Bars to leverage student skills. Below are 3 projects of interest. The Analytical Consulting Lab provides another great opportunity to provide students with rewarding experiences while allowing Element Bars to leverage student skills. Below are 2 projects of interest.

Project 1 – Search Engine Marketing and Search Engine Optimization

Element Bars shows up in the search results set of Google for both “organic” search results (Search Engine Optimization - SEO) and paid placement (Search Engine Marketing – SEM). We would like to analyze which keywords are driving the highest lifetime value of customers and then think about transitioning expensive and competitive keywords to SEO, while keeping cheap and non-competitive keywords within our Adwords SEM campaign. The data we can provide includes purchase behavior, Google Adwords access, and Google Analytics access.

Project 2 – Demographics of Purchasers via Google Analytics

We have purchase data that is stored on our web analytics platform (Google Analytics) and also our internal order system, but this data has not been tied to demographic data (either internally collected or via 3rd party sources). We would like to tie these data sets together and then analyze the highest (and lowest) value customers for demographic trends. The data we can provide is sales data, customer data, and Google Analytics data.
Chicago White Sox
chicago.whitesox.mlb.com

Project: The secondary ticket market provides a wealth of information for sports organizations. We are looking for a group to analyze historical and current White Sox secondary market ticket transactions to give us a better understanding of what is transpiring and how that translates into insights that can inform primary market ticketing decisions.

*We will need all participants on this project to sign an NDA.

Students will work with Beth Grabowski – long time ACL supporter and Kellogg grad!
Have you ever wanted to get in at the ground-level of something game changing like Facebook or Square? Well, here’s your chance.

Overview

According to Forbes magazine*, “Shopping cart abandonment is one of the biggest curses in the ecommerce industry.”

Paydunk is a mobile payment startup that will revolutionize the mobile checkout experience for consumers. While other companies are racing to bring the online experience into the store, Paydunk will simplify the checkout process by bringing the familiar in-store payment experience (Swipe card, enter PIN, done) to mobile devices.

This innovative approach will completely change mobile commerce as we know it.

So, who benefits?

By reducing the steps, time and inputs necessary to complete a mobile transaction, consumers will experience a simplified and streamlined checkout process and retailers will see a reduction to their abandon rate, an increase in conversion rate and an improvement in consumer satisfaction.

Working with Paydunk

This is a unique opportunity to experience a fast-moving startup in its infancy stage. The founders have established relationships with key industry leaders and have begun working with enterprise retailers. The app is currently in production with a top mobile development company and is expected to be completed and ready for launch on February 23, 2015 on both iOS and Android.

Working directly with the company’s founders (yes, that means cell phones and emails), students will have full access to all business documentation and financial information.

Objective

Paydunk seeks to establish an effective launch strategy.

The current mobile checkout experience is cumbersome with the majority of users abandoning their shopping carts due to the poor checkout experience. This is expected to be over $8 billion in Q4 of 2014 alone… Paydunk will help retailers recapture those sales.

As a mobile payment application, Paydunk seeks to leverage existing industry data to help build models and financial projections. Students will leverage data from current market competitors such as PayPal, Google Wallet, Visa Checkout, Apple Pay and others to help define Paydunk’s initial trajectory. The analysis and recommendations provided by YOU, the student team, will be instrumental in the strategy and launch of Paydunk.
Paydunk has two unique customers: 1) the retailer and 2) the consumer. Attracting and retaining each customer type will have its own set of challenges and opportunities.

Goals:

1. **Gauge the Market**
   - Interview ecommerce leaders to gain market perspective and insights to opportunities to boost mobile sales
   - Perform competitive analysis of the market
   - Recommend launch market (Domestic vs. International, Regional vs. National)

2. **Retailer Adoption & Traction**
   - Develop the strategy for achieving retailer adoption and identify the cost of acquisition
   - Project reduction of abandon carts, incremental sales, conversion lift, and contribution to EBITDA
   - Determine the lifetime value of the Paydunk user to the retailer

3. **Consumer Acceptance & Adoption**
   - Develop the strategy for achieving consumer acceptance and identify the cost of acquisition
   - Determine the percentage of consumers driven to purchase due to an enhanced checkout experience and expectation for unique discounts or savings
   - Perform marketing spend analysis of consumer acceptance based on incentive value
   - Determine marketing capital required to achieve consumer acceptance
   - Determine the Critical Mass of users required for sustainability

The mobile commerce space is the fastest growing sector in digital today, with exponential growth over the next five years totaling $700 billion dollars annually. Paydunk is uniquely positioned to capitalize on this emerging market. Every aspect of YOUR effort on this project is integral to the successful launch of Paydunk.

The founders, Mike and Rob would encourage student teams during the project selection phase and throughout the entirety of the project, to please reach out by phone or by email for insight or with questions. We look forward to working with you soon!

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Additional Resources:

CORPORATE WEBSITES:  
http://www.paydunk.com
http://www.paydunk.net

SOCIAL SITES:
https://www.linkedin.com/company/paydunk
https://www.facebook.com/paydunkllc
https://twitter.com/paydunk

TRADE SHOWS:
TECHDAY NEW YORK, April 23, 2015
https://techdayhq.com/events/ny-techday/participants/48
https://techdayhq.com/events/ny-techday
APP WORLD GERMANY, April 21-23, 2015
https://www.apps-world.net/germany/
https://www.apps-world.net/germany/exhibitions/exhibitors

*Reference:
Motorola Solutions (MSI) provides business- and mission-critical communication products and services to enterprises and governments. On any given day, every moment matters to someone, somewhere. And every moment, Motorola Solutions' innovations, products, and services play essential roles in people's lives.

We do this by connecting our customers to seamless communication networks, applications and services, by providing them with real-time information, and by arming them with intuitive, nearly indestructible radios and devices.

We help people be their best in the moments that matter.

The Strategy Analytics team at Motorola Solutions supports the Chief Strategy Officer by uncovering hidden insights about the business through rigorous and creative data analysis. Our work has significant visibility across the C-suite, and our analyses have led to numerous changes to the way we do business. Recent projects have included a product pricing analysis that revealed suboptimal pricing strategies and a revenue drivers model for what-if scenario analysis.

The theme of this quarter’s project will be predictive analytics. You will draw upon the knowledge gained from your DECS and strategy courses to answer the following questions:

1. What are the best external metrics that correlate to MSI’s revenue? How can we use these metrics to forecast both short and long term revenue

2. What do historical trends in revenue tell us about our customers’ buying behavior? How has it changed and how might we expect it to change in the future?

   a. Analyze historical buying patterns
   b. Analyze Install base, churn rate and replacement cycle
   c. Predict and integrate new product adoption

You will work side-by-side with the analytics team to answer these questions. Depending on the results of the project, you may have an opportunity to present your work to senior executives of the company.
Northwestern University Sports
www.nusports.com

As the eye of this proverbial NCAA national storm, we would like a thorough assessment conducted on the myriad benefits supplied by Northwestern University to its near 500 student-athletes – along with an associated monetary value. We are in the process of aggregating these benefits, from tuition and books to sports medicine training and career consultation. Once finalized, we will craft an appropriate communication vehicle to educate future prospects and families, and our current student-athletes.

For a variety of reasons, an objective, well-reasoned analysis is vital moving forward. Similar assessments will be in great demand in the near future for all intercollegiate athletic departments across the country.
The Chicago Bulls Analytics Department is excited to partner with the Kellogg School of Management on a project for the Analytical Consulting Lab. The Bulls Analytics Department is dedicated to improving revenue streams (e.g. tickets, sponsorship, merchandise), driving enhanced fan engagement and optimizing overall marketing efforts. The specific challenge to be addressed will involve analyzing a very important segment of the Bulls customer base – the single game buyer. Data from a recently executed survey of the individual game buyer population will be used to identify ways to better message or engage these buyers in the future. In addition, the team will provide single game buyer transactional information to assess pricing strategy and whether that ties to buying habits of this segment. The resulting findings will be used to inform the sales strategy for the 2015-16 season. This is a unique opportunity to introduce yourself to the Bulls and work with employees across several functions including Analytics, Ticketing and Marketing. The Bulls look forward to collaborating with students excited about working in sports.

Students will work with Matt Kobe, Kellogg and DECS 915 ACL Alum!
The Monterey Bay Aquarium is a leader in the care of the oceans and the health of fish and marine creatures. In order to better advise buyers of seafood, the Monterey Aquarium developed Seafood Watch (see seafoodwatch.org) that provides buyers advice and recommendations on the species of fish and shellfish to buy in order to promote sustainability and improve the wild stock of marine life.

In many ways, Seafood Watch has been a success. The remains a concern, however, that the US consumption of seafood is direct by many factors and may even be hyper sensitive to the Seafood Watch recommendations, putting new pressure on specific species and creation unforeseen consequences.

This study will examine the consumption and use of seafood in the US. Special focus will be given the importation of seafood and the economic value created by various participants. The goal is to leverage these insights to better understand who are the critical decision makers in the sourcing of sustainable seafood. For instance, should Seafood Watch focus on grocery stores, restaurants, food importers, ethnic food stores, sushi chefs, pet food producers, etc. and how specifically to communicate ego each of these groups.

Some analysis needed includes:

Look at the top categories of commodity seafood imported into the us (shrimp, tuna, farmed salmon, whitefish, crab)

Figure out how much of each type is purchased by the major buyer segments (grocery, large restaurant companies, contract foodservice, government (schools, military), small restaurants)

Make some commentary on whether the value added processing occurs outside the US or inside, if any.

Make some commentary on drivers of economic risk in each category (fraud, sustainability, labor conditions, etc.)

The real nugget is to identify major buyers that hold greatest sway over the supply chains for each fish category and recommend how Seafood Watch can better influence them.