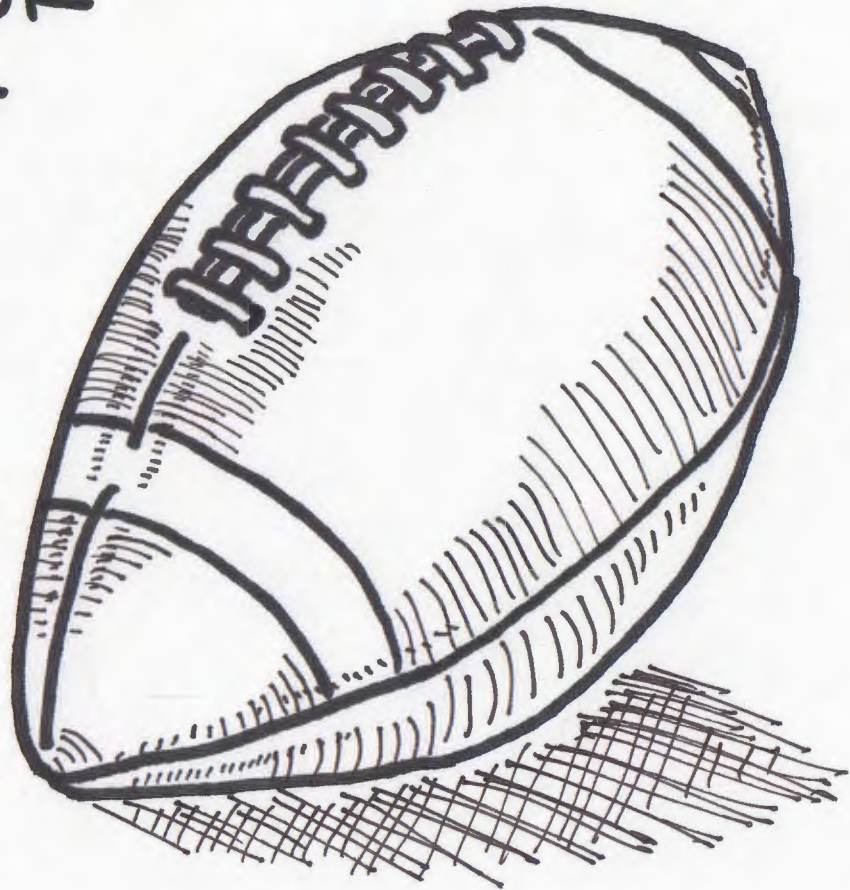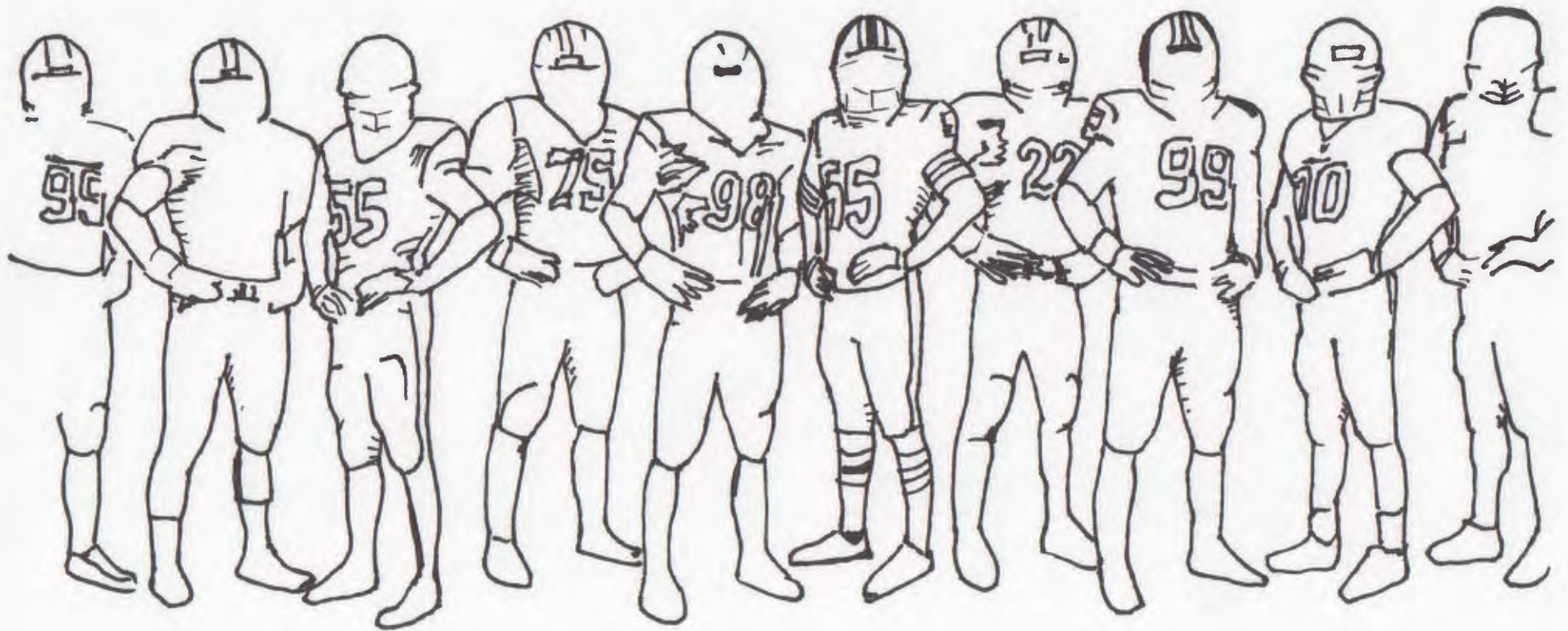# FANTASY FOOTBALL:

A TOUCHDOWN FOR UNDERGRADUATE STATISTICS EDUCATION

BEN MOTZ
INDIANA UNIVERSITY

HOW DOES THE GAME WORK?

WINNER! ⟵

CLOSER ¨

YOU GET POINTS FROM THESE GUYS {

NO POINTS HERE {

No Punt Intended

STARTERS

POS	Player	Opp	Status	Stats	Fantasy Points
QB	M. Stafford QB - DET	IND	Loss, 33-35	313 Pass Yds, 2 Pass TD, 1 Int	18.52
RB	R. Rice 💼 RB - BAL	PIT	Loss, 20-23	78 Rush Yds, 1 Rush TD, 5 Rec Yds	14.30
RB	C. Spiller RB - BUF	JAC	Win, 34-18	77 Rush Yds, 1 Rush TD, 7 Rec Yds	14.40
WR	D. Bryant WR - DAL	PHI	Win, 38-33	98 Rec Yds, 2 Rec TD	21.80
WR	D. Moore WR - OAK	CLE	Loss, 17-20	31 Rec Yds	3.10
TE	J. Gresham TE - CIN	@SD	Win, 20-13	35 Rec Yds, 1 Rec TD, 1 Fum	7.50
W/R	B. Brown RB - PHI	@OAL	Loss, 33-38	169 Rush Yds, 2 Rush TD, 1 Fum, 14 Rec Yds	28.30
K	M. Bryant 💼 K - ATL	NO	Win, 23-13	2 PAT, 1 20-29, 1 40-49, 1 50+	13.00
DEF	Texans DEF	@TEN	Win, 24-10	10 Pts, 6 Sck, 3 Int, 3 Fum	22.00

				Total Points:	**142.92**

BENCH

POS	Player	Opp	Status	Stats	Fantasy Points
BN	C. Palmer QB - OAK	CLE	Loss, 17-20	351 Pass Yds, 2 Pass TD, 1 Int, 3 Rush Yds	20.34
BN	F. Jones RB - DAL	PHI	Win, 38-33	26 Rush Yds	2.60
BN	R. Bush RB - MIA	NE	Loss, 16-23	64 Rush Yds	6.40
BN	M. Wallace WR - PIT	@BAL	Win, 23-20	44 Rec Yds	4.40
BN	T. Smith WR - BAL 💼	PIT	Loss, 20-23	33 Rec Yds	3.30
BN	A. Dalton QB - CIN	@SD	Win, 20-13	211 Pass Yds, 1 Pass TD, 2 Int, 5 Rush Yds	14.94

				Bench Points:	**54.98**

Da Helmets

STARTERS

POS	Player	Opp	Status	Stats	Fantasy Points
QB	M. Ryan 💼 QB - ATL	NO	Win, 23-13	165 Pass Yds, 1 Pass TD, -2 Rush Yds	10.48
RB	D. Martin RB - TB	@DEN	Loss, 23-31	56 Rush Yds, 42 Rec Yds	9.80
RB	A. Morris RB - WAS	NYG	Win, 17-16	124 Rush Yds, 1 Fum	10.40
WR	R. Wayne WR - IND	@DET	Win, 35-33	51 Rec Yds	5.10
WR	A. Green WR - CIN	@SD	Win, 20-13	85 Rec Yds	8.50
TE	K. Rudolph TE - MIN	@GB	Loss, 14-23	51 Rec Yds, 1 Rec TD	11.10
W/R	R. Cobb WR - GB 💼	MIN	Win, 23-14	62 Rec Yds, 5 Rush Yds	6.70
K	J. Tucker K - BAL 💼	PIT	Loss, 20-23	2 PAT, 1 20-29, 1 40-49	8.00
DEF	Broncos DEF	TB	Win, 31-23	23 Pts, 1 Sck, 1 Int, 1 TD	9.00

				Total Points:	**79.00**

BENCH

POS	Player	Opp	Status	Stats	Fantasy Points
BN	A. Boldin 💼 WR - BAL	PIT	Loss, 20-23	81 Rec Yds, 1 Rec TD	14.10
BN	M. Forte RB - CHI	SEA	Loss, 17-23	66 Rush Yds, 30 Rec Yds, 1 Rec TD	15.60
BN	M. Bush RB - CHI	SEA	Loss, 17-23	39 Rush Yds	3.90
BN	R. Gronkowski TE - NE 💼	@MIA	Win, 23-16		0.00
BN	L. McCoy RB - PHI	@OAL	Loss, 33-38		0.00
BN	Falcons DEF	NO	Win, 23-13	13 Pts, 1 Sck, 5 Int	15.00

				Bench Points:	**48.60**

SCREENSHOT FROM NFL.COM FANTASY PLATFORM.
YES, I ACTUALLY GOT WRITTEN PERMISSION FROM NFL
TO REPRODUCE THIS IMAGE. THEY STILL OWN IT.

EMPIRICISM

CURIOSITY ABOUT STATISTICS & DATA SEEM TO COME NATURALLY FROM FANTASY FOOTBALL GAMEPLAY.

HALVERSON & HALVERSON, 2008; COMEAU, 2007

Advanced NFL Stats .COM

PRO FOOTBALL FOCUS

FOOTBALL OUTSIDERS

COLD HARD FOOTBALL FACTS.COM

DATA POINTS

PYTHON + MECHANIZE + BEAUTIFUL SOUP

```python
from bs4 import BeautifulSoup
from mechanize import Browser

url = "http://espn.go.com/nfl/boxscore?gameId=322123009"
mech = Browser()
page = mech.open(url)
html = page.read()
soup = BeautifulSoup(html)

gamestats = soup.findAll("table")[5]
for row in gameStats.findAll("tr")[1:]:
    for col in row.findAll("td"):
        thisCell = col.get_text()
```

A1094 | 301010013

	gameid	week	season	gameDate	gameWeekday	awayTeam	homeTeam	awayScore	homeScore	gameLocation	gameTime	gameCove
1140	301031024	8	2010	10/31/2010	SUN	TEN	SD	25	33	Qualcomm Stadium, San Diego, CA	16:05:00	CBS
1141	301031025	8	2010	10/31/2010	SUN	DEN	SF	16	24	Wembley Stadium, London, ENG	13:00:00	CBS
1142	301101011	8	2010	11/1/2010	MON	HOU	IND	17	30	Lucas Oil Stadium, Indianapolis, IN	20:30:00	ESPN
1143	301107001	9	2010	11/7/2010	SUN	TB	ATL	21	27	Georgia Dome, Atlanta, GA	13:00:00	FOX
1144	301107002	9	2010	11/7/2010	SUN	CHI	BUF	22	19	Rogers Centre, Toronto, Ontario	13:00:00	FOX
1145	301107005	9	2010	11/7/2010	SUN	NE	CLE	14	34	Cleveland Browns Stadium, Cleveland, OH	13:00:00	CBS
1146	301107008	9	2010	11/7/2010	SUN	NYJ	DET	23	20	Ford Field, Detroit, MI	13:00:00	CBS
1147	301107009	9	2010	11/7/2010	SUN	DAL	GB	7	45	Lambeau Field, Green Bay, WI	20:20:00	NBC
1148	301107013	9	2010	11/7/2010	SUN	KC	OAK	20	23	Oakland-Alameda County Coliseum, Oakland, CA	16:15:00	CBS
1149	301107016	9	2010	11/7/2010	SUN	ARI	MIN	24	27	Mall of America Field, Minneapolis, MN	13:00:00	FOX
1150	301107021	9	2010	11/7/2010	SUN	IND	PHI	24	26	Lincoln Financial Field, Philadelphia, PA	16:15:00	CBS
1151	301107026	9	2010	11/7/2010	SUN	NYG	SEA	41	7	CenturyLink Field, Seattle, WA	16:05:00	FOX
1152	301107029	9	2010	11/7/2010	SUN	NO	CAR	34	3	Bank of America Stadium, Charlotte, NC	13:00:00	FOX
1153	301107033	9	2010	11/7/2010	SUN	MIA	BAL	10	26	M&T Bank Stadium, Baltimore, MD	13:00:00	CBS
1154	301107034	9	2010	11/7/2010	SUN	SD	HOU	29	23	Reliant Stadium, Houston, TX	13:00:00	CBS
1155	301108004	9	2010	11/8/2010	MON	PIT	CIN	27	21	Paul Brown Stadium, Cincinnati, OH	20:30:00	ESPN
1156	301111001	10	2010	11/11/2010	THU	BAL	ATL	21	26	Georgia Dome, Atlanta, GA	20:20:00	NFL
1157	301114002	10	2010	11/14/2010	SUN	DET	BUF	12	14	Ralph Wilson Stadium, Buffalo, NY	13:00:00	FOX
1158	301114003	10	2010	11/14/2010	SUN	MIN	CHI	13	27	Soldier Field, Chicago, IL	13:00:00	FOX
1159	301114005	10	2010	11/14/2010	SUN	NYJ	CLE	26	20	Cleveland Browns Stadium, Cleveland, OH	13:00:00	CBS
1160	301114007	10	2010	11/14/2010	SUN	KC	DEN	29	49	Sports Authority Field at Mile High, Denver, CO	16:05:00	CBS
1161	301114011	10	2010	11/14/2010	SUN	CIN	IND	17	23	Lucas Oil Stadium, Indianapolis, IN	13:00:00	CBS
1162	301114015	10	2010	11/14/2010	SUN	TEN	MIA	17	29	Sun Life Stadium, Miami, FL	13:00:00	CBS
1163	301114019	10	2010	11/14/2010	SUN	DAL	NYG	33	20	MetLife Stadium, East Rutherford, NJ	16:15:00	FOX
1164	301114022	10	2010	11/14/2010	SUN	SEA	ARI	36	18	U of Phoenix Stadium, Glendale, AZ	16:15:00	FOX
1165	301114023	10	2010	11/14/2010	SUN	NE	PIT	39	26	Heinz Field, Pittsburgh, PA	20:20:00	NBC
1166	301114025	10	2010	11/14/2010	SUN	STL	SF	20	23	Candlestick Park, San Francisco, CA	16:15:00	FOX
1167	301114027	10	2010	11/14/2010	SUN	CAR	TB	16	31	Raymond James Stadium, Tampa, FL	13:00:00	FOX
1168	301114030	10	2010	11/14/2010	SUN	HOU	JAC	24	31	EverBank Field, Jacksonville, FL	13:00:00	CBS
1169	301115028	10	2010	11/15/2010	MON	PHI	WSH	59	28	FedEx Field, Landover, MD	20:30:00	ESPN
1170	301118015	11	2010	11/18/2010	THU	CHI	MIA	16	0	Sun Life Stadium, Miami, FL	20:20:00	NFL
1171	301121004	11	2010	11/21/2010	SUN	BUF	CIN	49	31	Paul Brown Stadium, Cincinnati, OH	13:00:00	CBS
1172	301121006	11	2010	11/21/2010	SUN	DET	DAL	19	35	Cowboys Stadium, Arlington, TX	13:00:00	FOX
1173	301121010	11	2010	11/21/2010	SUN	WSH	TEN	19	16	LP Field, Nashville, TN	13:00:00	FOX
1174	301121012	11	2010	11/21/2010	SUN	ARI	KC	13	31	Arrowhead Stadium, Kansas City, MO	13:00:00	FOX
1175	301121014	11	2010	11/21/2010	SUN	ATL	STL	34	17	Edward Jones Dome, St. Louis, MO	16:05:00	FOX
1176	301121016	11	2010	11/21/2010	SUN	GB	MIN	31	3	Mall of America Field, Minneapolis, MN	13:00:00	FOX
1177	301121017	11	2010	11/21/2010	SUN	IND	NE	28	31	Gillette Stadium, Foxboro, MA	16:15:00	CBS
1178	301121018	11	2010	11/21/2010	SUN	SEA	NO	19	34	Mercedes-Benz Superdome, New Orleans, LA	16:05:00	FOX

Sheet1 Sheet2 Sheet3

SUMMARIZING AND MANIPULATING DATA IN EXCEL
- WHAT WAS THE BIGGEST SURPRISE OF WEEK 2?
- WHO IS THE MOST CONSISTENT QB, RB, WR, ETC.?

CORRELATION & REGRESSION ANALYSIS
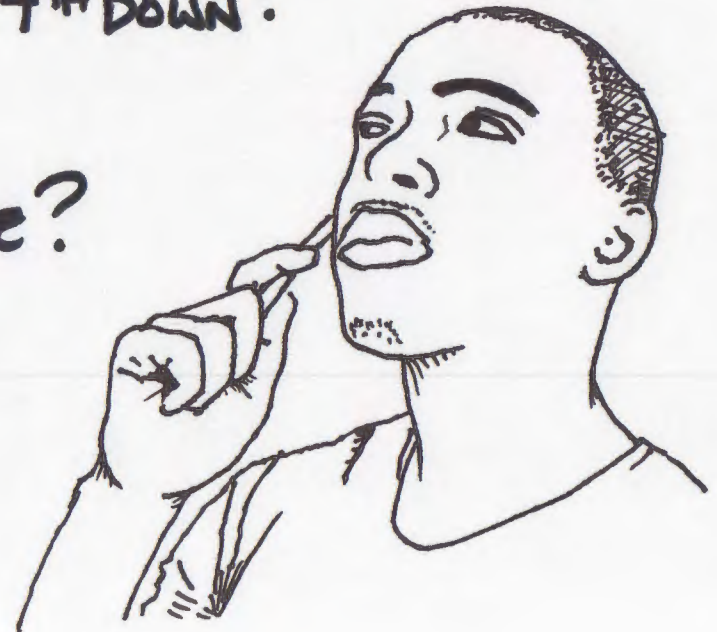- WHAT SITES HAVE THE MOST ACCURATE PROJECTIONS?

OPTIMIZATION & SIMULATION
- WHEN SHOULD A TEAM GO-FOR-IT ON 4TH DOWN?

CLUSTER ANALYSIS
- WHAT KIND OF QBs DO YOU HAVE?

FULL SYLLABUS & TOPIC SCHEDULE AT:
http://pigskin.psych.indiana.edu/?page_id=20

IF YOU KNOW IT, YOU CAN WRITE ABOUT IT.

I will be the first to recognize how I am a complete noob in this subject. I have never played fantasy prior to this course nor did I know fantasy football was such a component to this course. The first day of class I was discouraged. I'm a freshman girl who is totally unprepared and taken aback by the course she just sat in. I called my parents frazzled. They advised me to continue and give the course a chance. I am so glad I did. The concept of the course is to arrange classes around something fun and active that students are passionate about. [[...]

WHAT TO MAKE OF MURRAY

By bnahrsta

DeMarco Murray first burst onto the scene in Week 7 last year against the St. Louis Rams. In that game, Murray carried the ball 25 times for 253 yards and a touchdown. This resulted in a 31.3 point game in fantasy. Ever since running over the Rams' defense, Murray has been a staple in the Cowboys' offense. The problems occur when he gets injured, which he is prone to do. In Week 14 last year, Murray injured his ankle and did not play the rest of the year. However, while he was playing last year, he was very productive. In games in which he started [...]

DONT SLEEP ON ST. LOUIS

By ityoon

If you have read my blog posts before, you would know I am a fanatic Rams fan. I grew up in St. Louis and have been watching the blue and gold since Trent Green went down. After 5 losing seasons, and 2 different head coaches, many people in the city have lost faith in the franchise. But this year under new head coach Jeff Fisher, the Rams have made considerable steps toward being a playoff team again. His mentality of physical play and aggressive style has re-amped this franchise. But a coach can only do so much, and three players in particular [...]

BREES WAS A GOOD PICK

By joehobso

Drew Brees has been one of the best quarterbacks in this decade. He has put up some crazy numbers and set numerous records. This is part of the reason that I decided to pick up Drew with my first pick, the second overall pick in my league's draft.

Over the past 3 seasons, out of all the quarterbacks that played, he has the most passing attempts, passing completions, passing yards, and passing touchdowns. This Pivot Table shows some stats from the top quarterbacks over the past 3 seasons. The table is sorted in descending order by passing attempts, but you can still see that Brees [...]
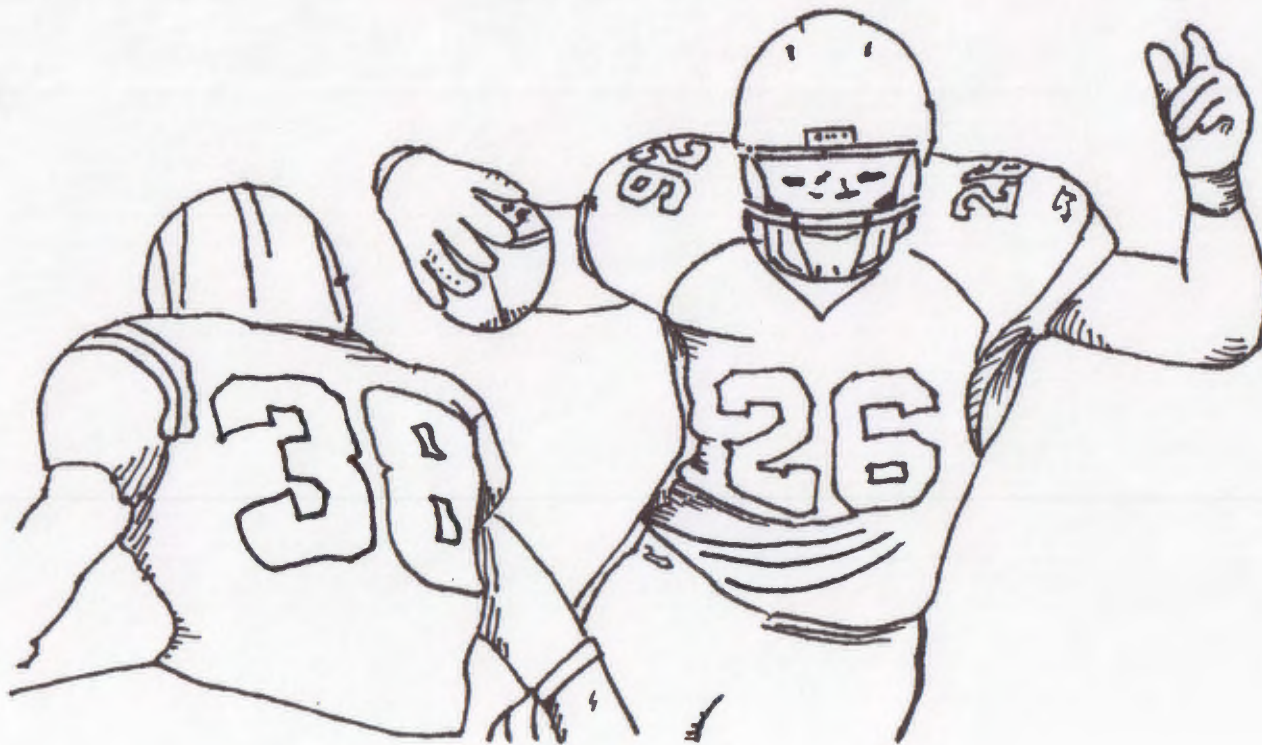
AMAZING ADRIAN

By jgrolima

Over the past few seasons Adrian Peterson has consistently been one of the top running backs in the entire league. Last year, during a game against the Washington Redskins, he suffered a very unfortunate ACL and MCL tear and the diagnoses did not look very good. There was question as to whether Peterson would be able to play in the 2012 season and worst-case scenario, if he would ever play again.
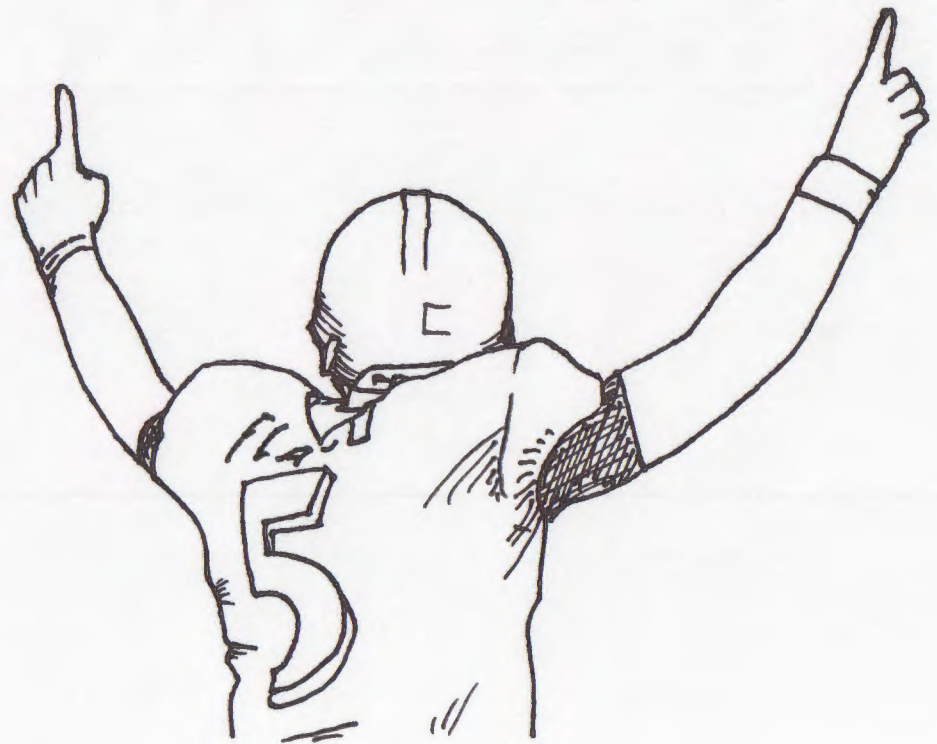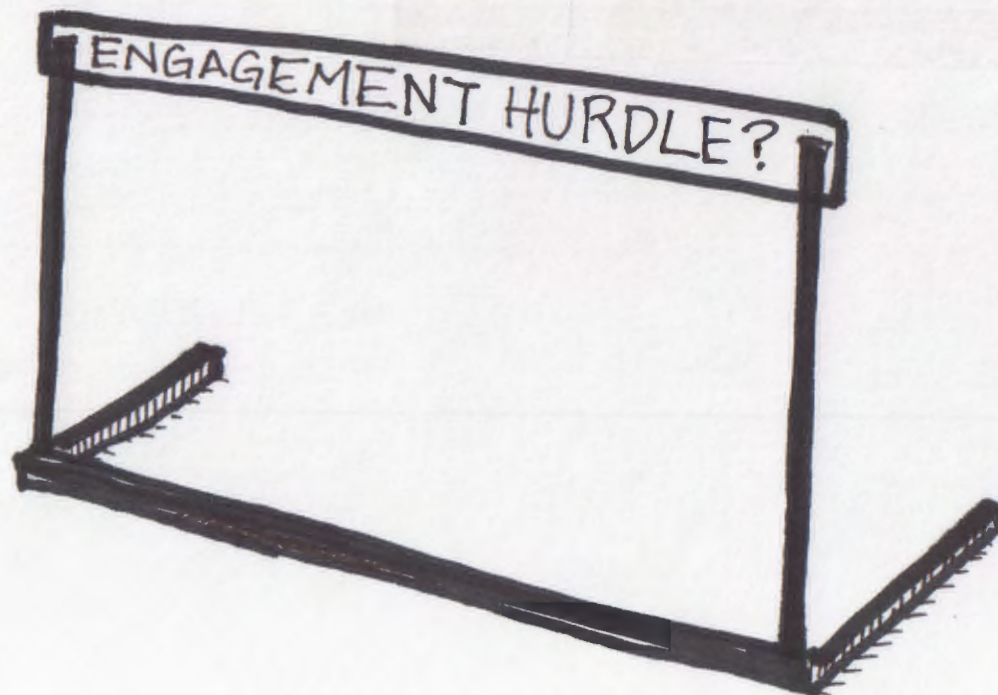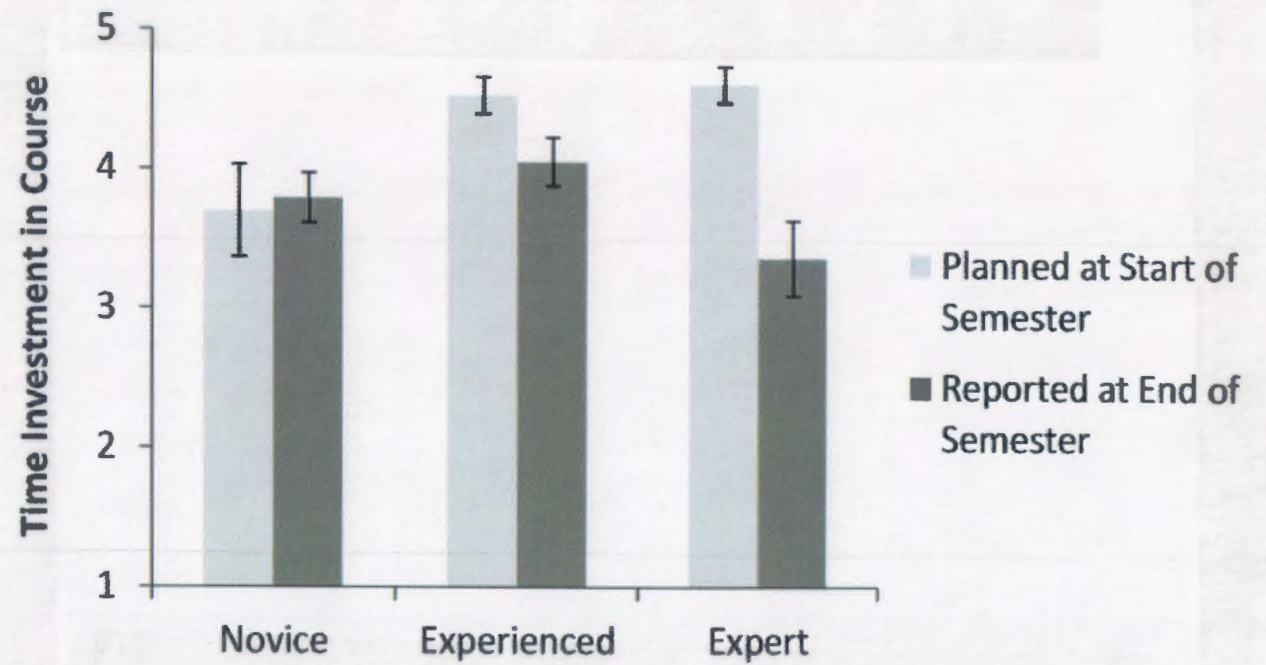
INSIGHTS

FF DATA-SAVVY IS GENERALIZABLE

BLOG POSTS (ABOUT FF) WERE HIGHLY CORRELATED WITH SCORES ON EXAMS (ABOUT DATA ANALYSIS)
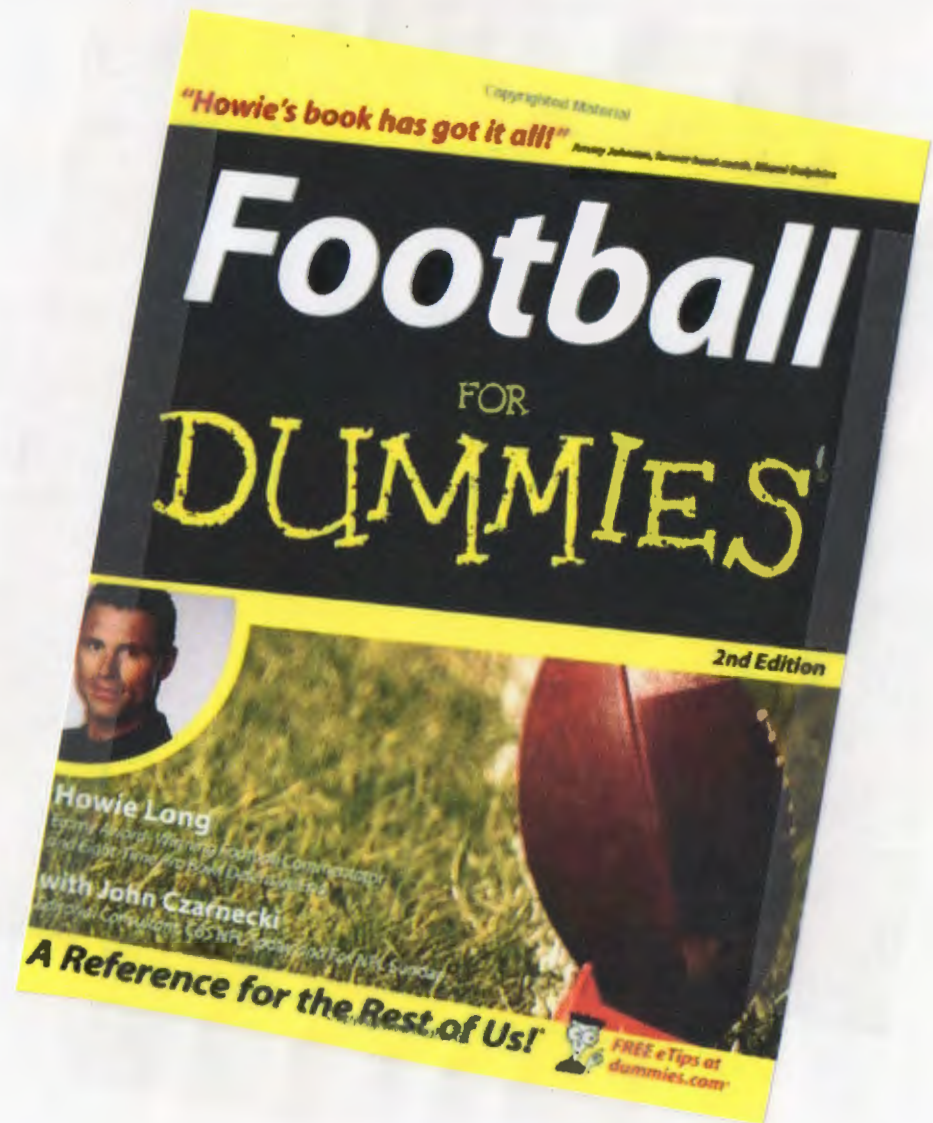
$r = 0.656, p < 0.001$

FANTASY FOOTBALL IS ACCESSIBLE

- NO CORRELATION BETWEEN FF EXPERIENCE AND END-OF-SEMESTER GRADES

  $r = -0.012$, ns

- NO GRADE DIFFERENCE BETWEEN MALE AND FEMALE STUDENTS

  $t(57) = .709$, ns

THANKS!

also...

CORY MUMMERY
SENIOR DIRECTOR DIGITAL PRODUCT, NFL

SHAWN BARR
GRADUATE TEACHING ASST. EXTRAORDINAIRE

MIKE MCKNIGHT
CONTRIBUTING WRITER, SPORTS ILLUSTRATED

LAURA PLUMMER
INDIANA UNIVERSITY CITL

NATE RAVITZ
DEPUTY EDITOR, ESPN.com FANTASY