



Digital Business: Foundational Knowledge for 21st Century Jobs

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Data Sciences and Operations Department
*Where you learn how
businesses work from the ground up!*

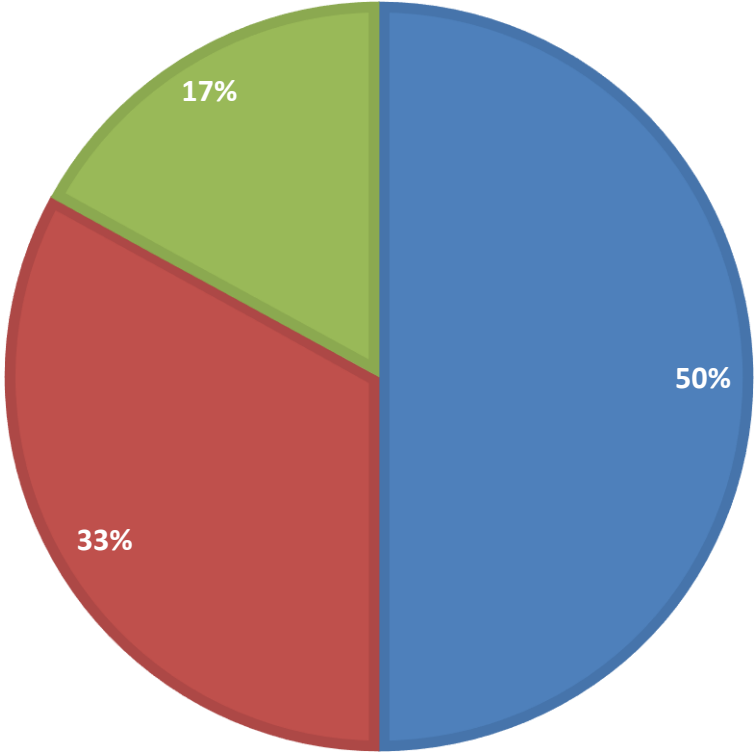
What is Digital Business:

Start-ups or Established organizations that use:

- a range of “smart” data-intensive technologies
- to continuously integrate
- digital innovations
- into their operating business models

% OF BUSINESSES INTEGRATING DIGITAL INNOVATIONS INTO THEIR OPERATING BUSINESS MODELS

■ by 2016 ■ by 2019 ■ not ready yet



Businesses must be able to create & use new technologies all the time!



Accelerometers + Gamification help kids lose weight



Bitcoins used by EBay

Drones make deliveries



Google Glass guides surgeons

121TIME
CREATE YOUR OWN WATCH



Businesses must be able to make products unique for each customer!!!



Medications
Customized for You



Or Enable customers to develop own apps or clothes!



Businesses Must be Able to Be Started In Hours, Not Years



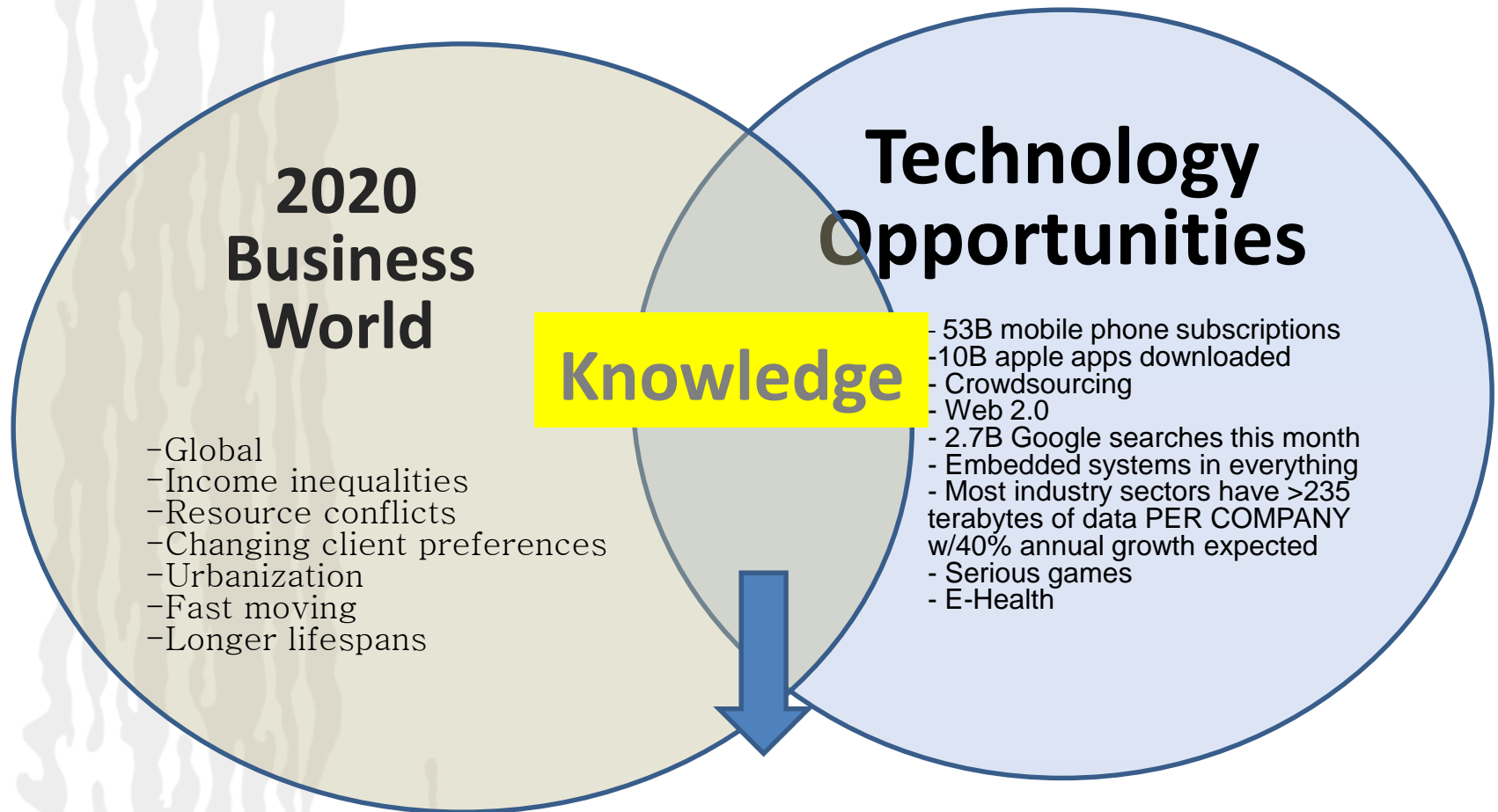
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- Overview
- Simple
- Your Industry
- Attract Customers
- Packages ▶

But making digital business work takes new knowledge



- Avoid security breaches
- Make decisions based on BIG data
- Effectively implement SCM, CRM, SAP, “Cloud”, EDI, VPN, ISP, KM

Ex Digital Business Jobs with BS in Business*

(\$75Kmed salary)

Marketing Analysts

Database Administrators

SAP Certified Analyst

Project Manager

Data Scientist

Systems or Process Analyst

Financial Investment Advisor

Business Operations Analyst or Manager



Management Consultant

Social Media Manager

Hi Tech Sales Reps

Technology Consultant

User Experience Designer

*US News, WSJ, Smart Money, dice.com, monster.com, collegerecruiter.com, Careerbuilder.com, jobcentral.com, job.com, career.com, simplyhired.com, truecareers.com

WHO HIRES?

Consulting Firms:

- Accenture
- Deloitte
- IBM
- Cap Gemini/Ernst&Young
- Small consulting firms
- PWC
- KPMG

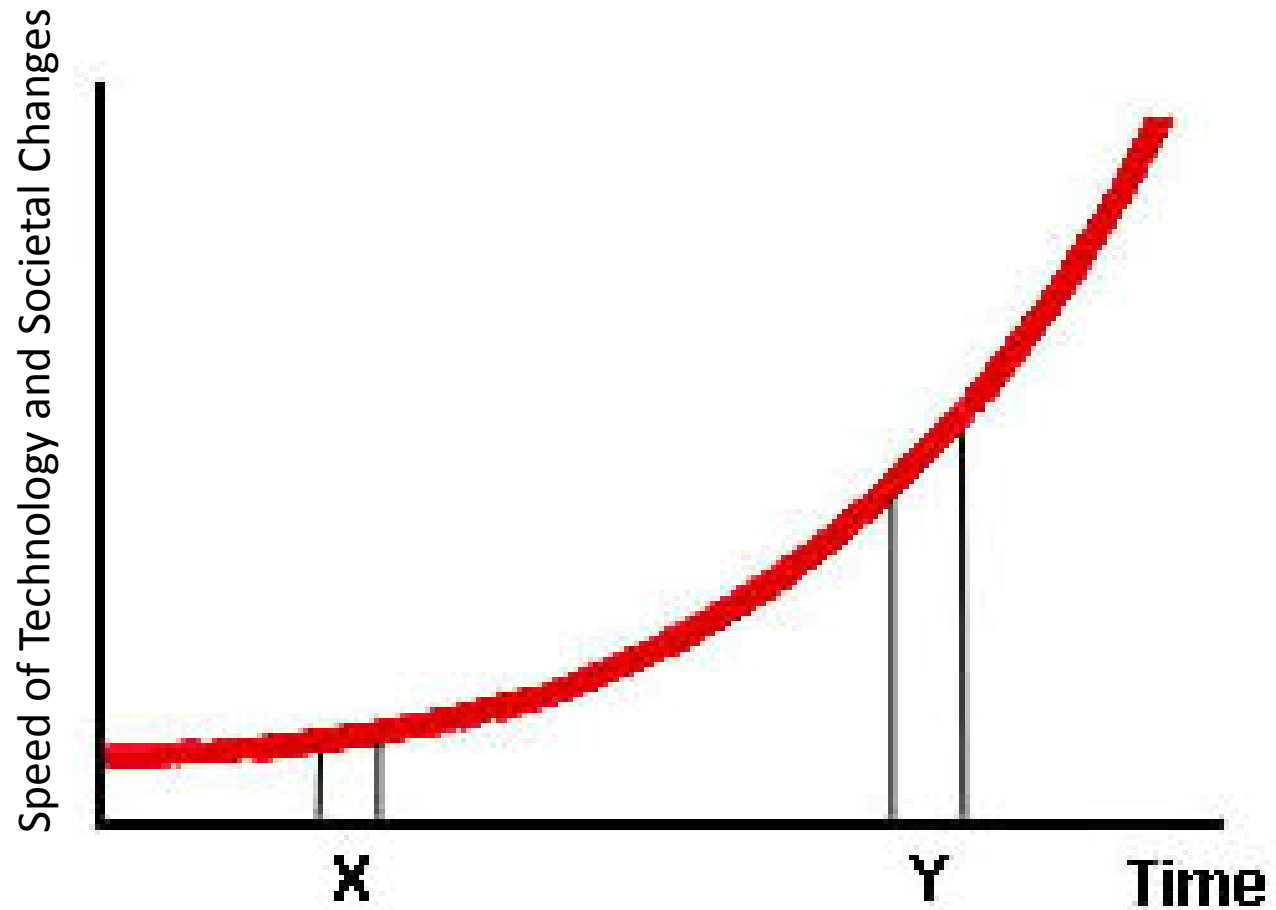
Businesses:

- Disney
- Kaiser Permanente
- Citizens Bank
- Standard & Poor
- Target/Home Depot
- Citi Group
- McGraw Hill
- Capital Group
- United Health Group
- Comcast
- Sony
- Lots of small
businesses

Electives With ***NO PREREQUISITES***

Open to Freshman and Beyond

- DSO 431: Foundations of Digital Business Innovation
- DSO433: Business Process Design
- DSO435: Enterprise Data Architecture
- DSO 402: Database Applications
- DSO 401: Designing Spreadsheet-based Business Models
- DSO 462: Managing a Small Business on the Internet
- DSO 428: Essentials and Digital Frontiers of Big Data
- DSO 443: Business of Digital Entertainment



**We are living in exponential times.
Do join us and make a difference?**



**For questions about Digital Business:
Professor Ann Majchrzak
DSO Department
majchrza@usc.edu**

Specifics about sample job titles

Data Scientist*

What they do all day:

- Apply various tools and methods to find business value from meaningful patterns and insights in the large data sets that are generated every second by such firms as Facebook, Linked In, Amazon, Ralph's, Harrahs.

What makes the job great?

- This is a cutting-edge field. The information explosion is spurring types of analysis that have never been performed before.
- The skill set is unique, and employers are willing to pay for qualified candidates. Six-figure paydays aren't uncommon.

Social Media Manager*

What they do all day:

- Become eyes, ears and, increasingly, the voice of a company. Combining PR, marketing and customer service skills, they're tuned into what people are saying while promoting a company's presence on Facebook, Twitter and other social platforms.

What makes the job great?

- With access to all areas of a business, social media managers acquire vast knowledge of the inner workings of a company and its goals. That's valuable insight, especially for someone looking to move up the ranks, says Jim Durbin, a social media headhunter and entrepreneur.

Business or Systems Analyst*

Median pay: \$83,100

Top pay: \$117,000

10-year job growth: 20%

Total jobs: 130,000

What they do all day:

- Evaluates how a company can use its technology to improve production or workflow.
- That may mean coming up with alternative software applications or overhauling an entire system.
- Demand for these skills has skyrocketed, particularly now that every company is looking for ways to cut costs while still maintaining productivity

Consultant*

What they do all day:

- Companies from startups to the Fortune 500 hire information technology consultants to figure out the fastest, cheapest and most reliable ways to make their computer systems run better.
- They assess a firm's tech needs, create a plan, see it through and follow up to make sure it's running well.

What makes it great?

- Even big businesses know that high-level tech issues can be a Pandora's box of trouble.
- A sharp IT consultant with the right specialty will command a premium rate and solve a company's problems -- ensuring future work down the road

Database Administrator*

What they do all day:

- Design the enterprise data architecture
- Mind all the data in a company's storehouse
- Keep data safe
- Make sure data are easily accessible

Hi Tech Sales Reps

- **“We are looking for Sales Reps who are passionate about smartphones, tablets and apps.** If you have a great attitude, love helping customers, and are not afraid to work hard every day, Snappii can offer you an opportunity to grow with the company that is taking the mobile apps market by storm. We offer a base salary plus a commission plan with no income cap.” (Snappii)

DSO 428:

-- ESSENTIALS AND DIGITAL FRONTIERS OF BIG DATA

Instructor: Prof. Tianshu Sun

Fall 2017

Time: TueThu 4-5:50pm / 6-7:50pm

DSO428: Prof. Tianshu Sun

- **Data Scientist**@LivingSocial, Adobe, Efficient Frontier, Ministry of Health & Consult for firms in US and China
- Interact with big data intensively using **Digital Tools** (Hadoop, Database/SQL, Google Analytics, Tableau)
- Help firms **recruit big data talents** (e.g. Business Analysts/Data Scientist)
- PhD in Information Systems / Taught at USC & UMD

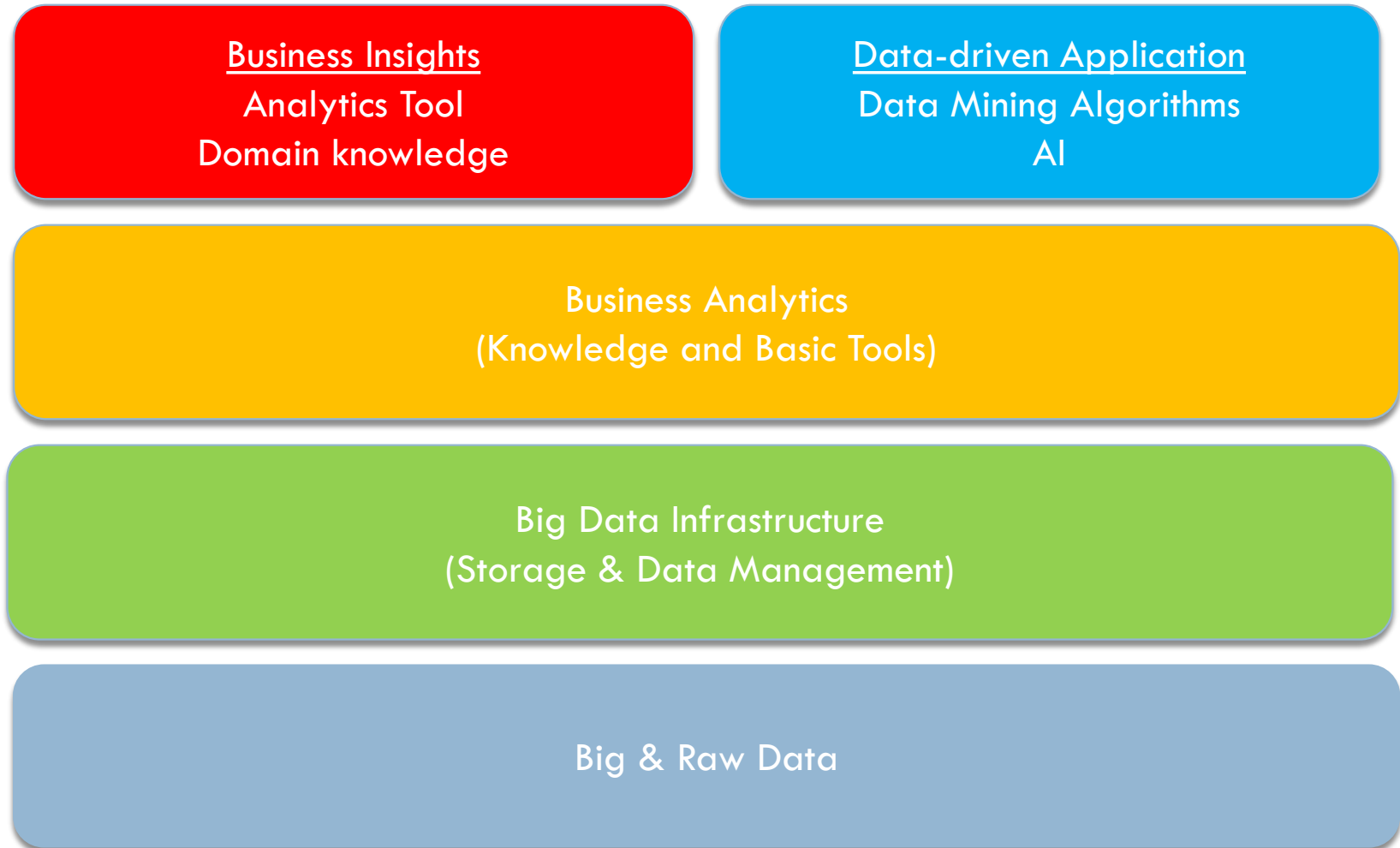
Bring knowledge & experience **from Industry to the Class**

Prepare you for data-related job (OM,Marketing,Finance,BI)

DSO 428: Who should take it?

- **No pre-requisites:** 1st course on business analytics/big data
- **General education** or **NON-technical students** (students with business background)
- Students who are looking for **an intern or job** that values **basic knowledge/skill on business analytics and related digital tools**(Business Intelligence, Digital/social marketing, Financial Analysis, Product Management, entrepreneurship)
- **Key concepts and hands-on experience** at introductory level
- **Guest Speakers from Industry** (Snapchat/Netflix/Microsoft)

Big Data Landscape: From Raw Data to Value



Big Data Landscape: From Raw Data to Value

Business Insights

Analytics Tool (GA, A/B testing)
Domain knowledge (Guest Speakers)

Data-driven Application

Data Mining Algorithms (Most used)
AI (Intro to deep learning)

Business Analytics

(Knowledge and Basic Tools: SQL, Tableau, OLAP)

Big Data Infrastructure

(Storage: Hadoop/MapReduce/Spark & Data Management: Data Model)

Big & Raw Data

DSO 428: FALL 2017

-- ESSENTIALS AND DIGITAL FRONTIERS OF BIG DATA

Course Modules (**all at introductory level**):

Big Data Management (SQL, Hadoop, DW, etc.)

Big Data Analytics (A/B test, GA, Tableau, Data Mining)

Big Data Landscape (Career path and Opportunities)

Instructor: **Prof. Tianshu Sun**