

INSY336 Data handling and coding for analytics 🚀

Kyunghee Lee

About me

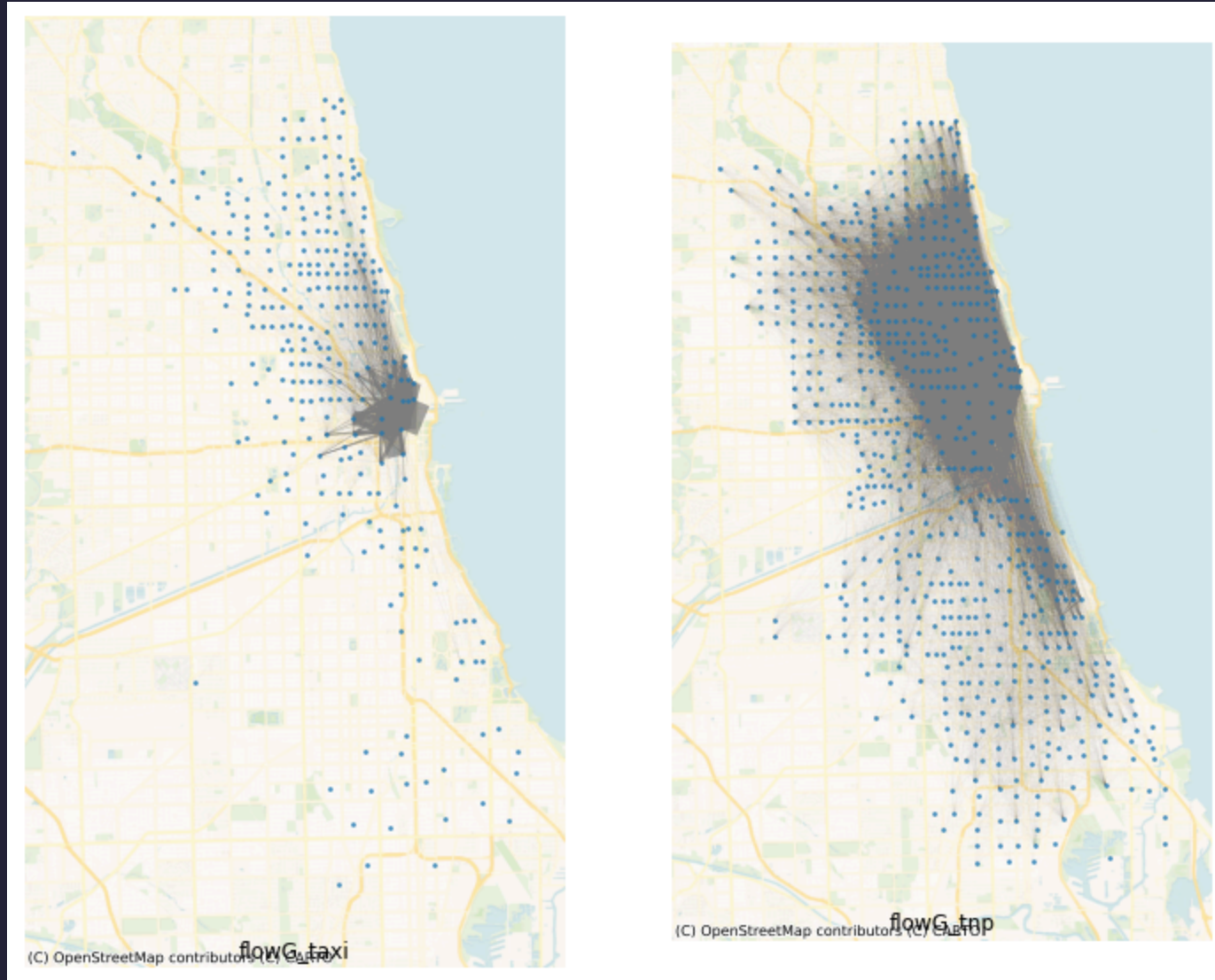
- Kyung Hee Lee
- Assistant Professor of Information Systems, McGill (2023-)
 - Assistant Professor, Wayne State (2017-2023)
 - Postdoctoral researcher, McGill (2016-2017)
- PhD in Management Engineering, KAIST
- Research: digital platforms, decentralized applications, machine learning for construct measurement



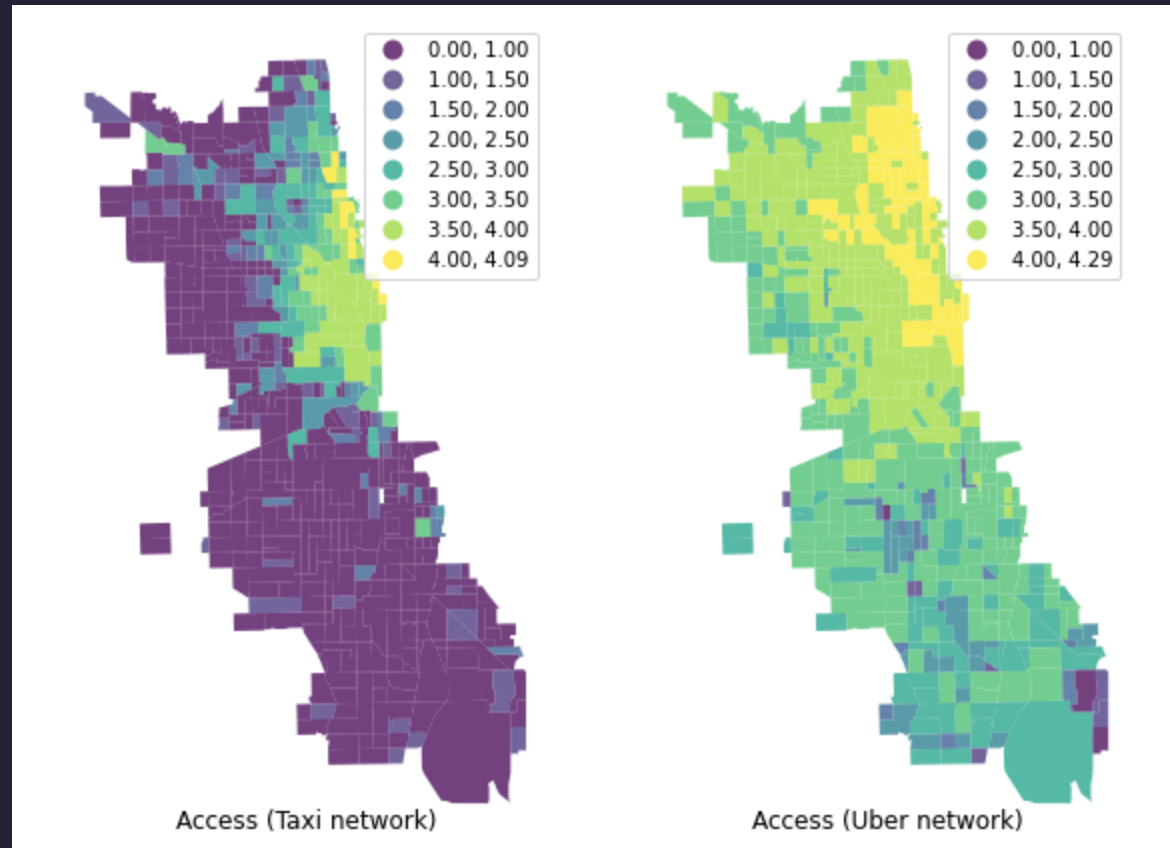
- Dugmee Hwang (Dug Mee Hwang)
- PhD student in Information Systems

Q: Can Uber improve access to healthy foods in food desert areas?

Taxi vs. Uber trips in 2019 (from Chicago Data Portal)



Taxi vs. Uber: Accessibility to grocery stores



Data Scientist: The Sexiest Job of the 21st Century

Meet the people who can coax treasure out of messy, unstructured data. by Thomas H. Davenport and DJ Patil

From the Magazine (October 2012)

Is Data Scientist Still the Sexiest Job of the 21st Century?

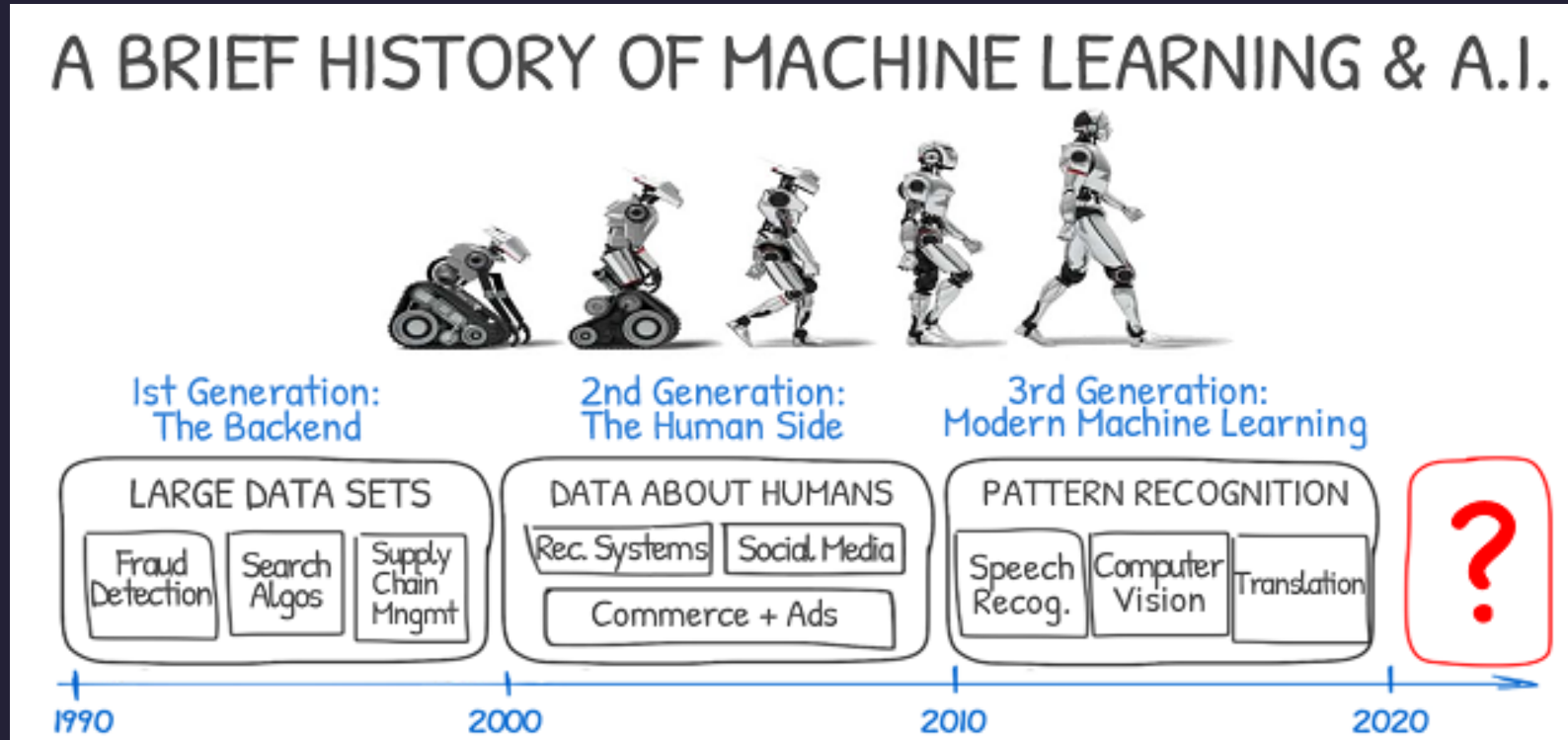
by Thomas H. Davenport and DJ Patil

July 15, 2022

<https://hbr.org/2012/10/data-scientist-the-sexiest-job-of-the-21st-century>

<https://hbr.org/2022/07/is-data-scientist-still-the-sexiest-job-of-the-21st-century>

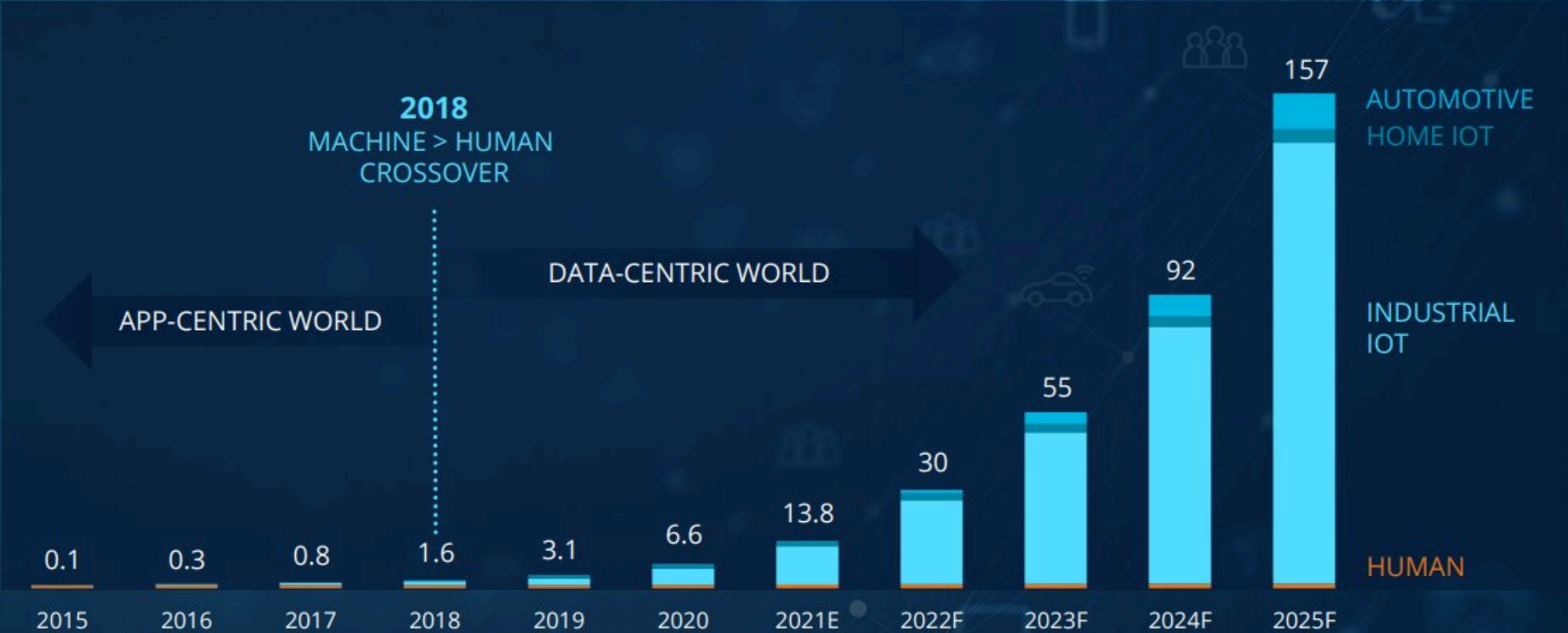
Data is the new oil



<https://medium.com/@ODSC/the-history-and-future-of-ai-with-michael-i-jordan-85f9962ff139>

https://ana.blogs.com/maestros/2006/11/data_is_the_new.html

Data Generation By Category (ZB)



SEMI GROWTH NO LONGER LIMITED BY HUMAN CONSUMPTION

Source: Applied Materials

Applied Materials External Use



How Target Figured Out A Teen Girl Was Pregnant Before Her Father Did



Kashmir Hill Former Staff

Tech

Welcome to The Not-So Private Parts where technology & privacy collide

 This article is more than 8 years old.

Every time you go shopping, you share intimate details about your consumption patterns with retailers. And many of those retailers are studying those details to figure out what you like, what you need, and which coupons are most likely to make you happy.

[Target](#), for example, has figured out how to data-mine its way into your womb, to figure out whether you have a baby on the way long before you need to start buying diapers.

Charles Duhigg outlines in the [New York Times](#) how Target tries to hook parents-to-



TARGET

Target has got you in its aim

Targeted Ad

- estimated "pregnancy score" based on purchase pattern
- sent coupons along the different stages of pregnancy

<https://www.forbes.com/sites/kashmirhill/2012/02/16/how-target-figured-out-a-teen-girl-was-pregnant-before-her-father-did/#6298ff1e6668>



AI recruiter

<https://www.youtube.com/embed/8QEK7B9GUhM>

<https://www.economist.com/business/2013/04/06/robot-recruiters>

Spatial Finance

Brokerage

HOW SATELLITE IMAGERY IS HELPING HEDGE FUNDS OUTPERFORM

June 26, 2020

How hedge funds use drones, satellite images and web scraping to gain an edge



By Matt Egan, CNN Business

Published 4:33 PM EDT, Wed July 10, 2019



Course objective

- Understand and apply fundamental programming concepts in Python.
- Utilize Python libraries to read and manipulate data.
- Perform basic data cleaning, wrangling, and analysis tasks.
- Use SQL for managing data in relational databases.
- Implement an end-to-end Extract-Transform-Load (ETL) workflow.



Extract

Retrieves and verifies data
from various sources



Transform

Processes and organizes
extracted data so it is usable



Load

Moves transformed data
to a data repository

Module 1 - Fundamentals of programming in Python

Module 2 - Data Manipulation in SQL

Module 3 - Extract-Transform-Load (ETL) using Python and SQL

Tools

- Python
- SQL
- Ed Lesson (cloud-hosted Jupyter Notebook)
- DataCamp

Coursework

- In-Class Exercise (ungraded)
- Take-Home Exercise
- Assignment
- Quiz
- Exam

Grading policy

Component	Weight (%)
Participation	5
Take-Home Exercise	10
Assignment	25
Quiz	30
Exam	30

Logistics

- Course website: <https://insy336.github.io/{section number}>
 - Section 001: <https://insy336.github.io/001>
 - Section 002: <https://insy336.github.io/002>
- Ed Lesson: <https://edstem.org>
- MyCourses: for grades
- Questions
 - Post on Ed Lesson
 - Email TA or me

Getting to know your classmates

- Background
- Career goal?
- What got you interested in this course?
- What do you do for fun other than coding?
- Tips for surviving Montreal winter?