Work in the 21st Century

Technology driven ~~disruption~~ innovation
(A Summary)

Karim Virjee

Poll question : Spectate or Participate?

Poll question : Movies watched?

Anecdotes, insights, and experiences from the world of technology blended into utility and entertainment answering the question:

Impact of technology on ‘Jobs of the 21st Century’ and how do we prepare our clients?

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Impact of technology on 'Jobs of the ~~21st Century~~' Next five to ten years and how do we prepare our clients?

Technology such as:

- **Internet of Things (IoT),**
- **5th Generation Cellular Networks (5G),**
- **Cloud Computing,**
- **Distributed Ledger (**a.k.a. **Block Chain),**
- **Big Data, Machine Learning,**
- **…**

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it is “how” you see.
So that adaption is easy.

Overview

1. What triggered my thinking
2. A bit about me and my world
3. Technology over the past decade
4. Cloud Computing, IoT, 5G, Big Data, Machine Learning, AI, and … Automation.
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2. Major Themes for transformation
3. How do “I” participate in the Digital world?
4. Finding FLOW
5. The 4C’s of the 21st Century
6. Some tools to guide career decision making (if time permits)

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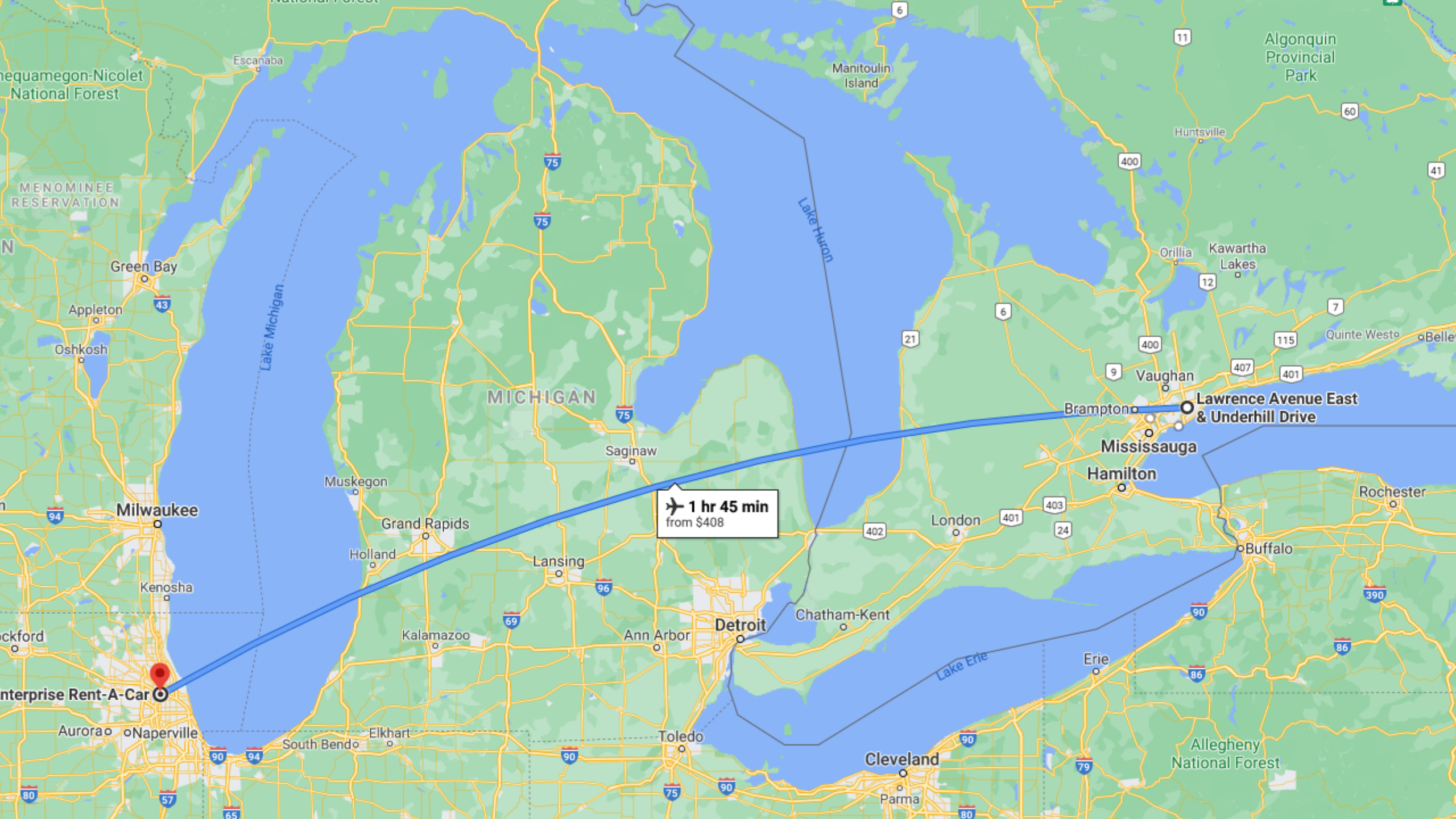
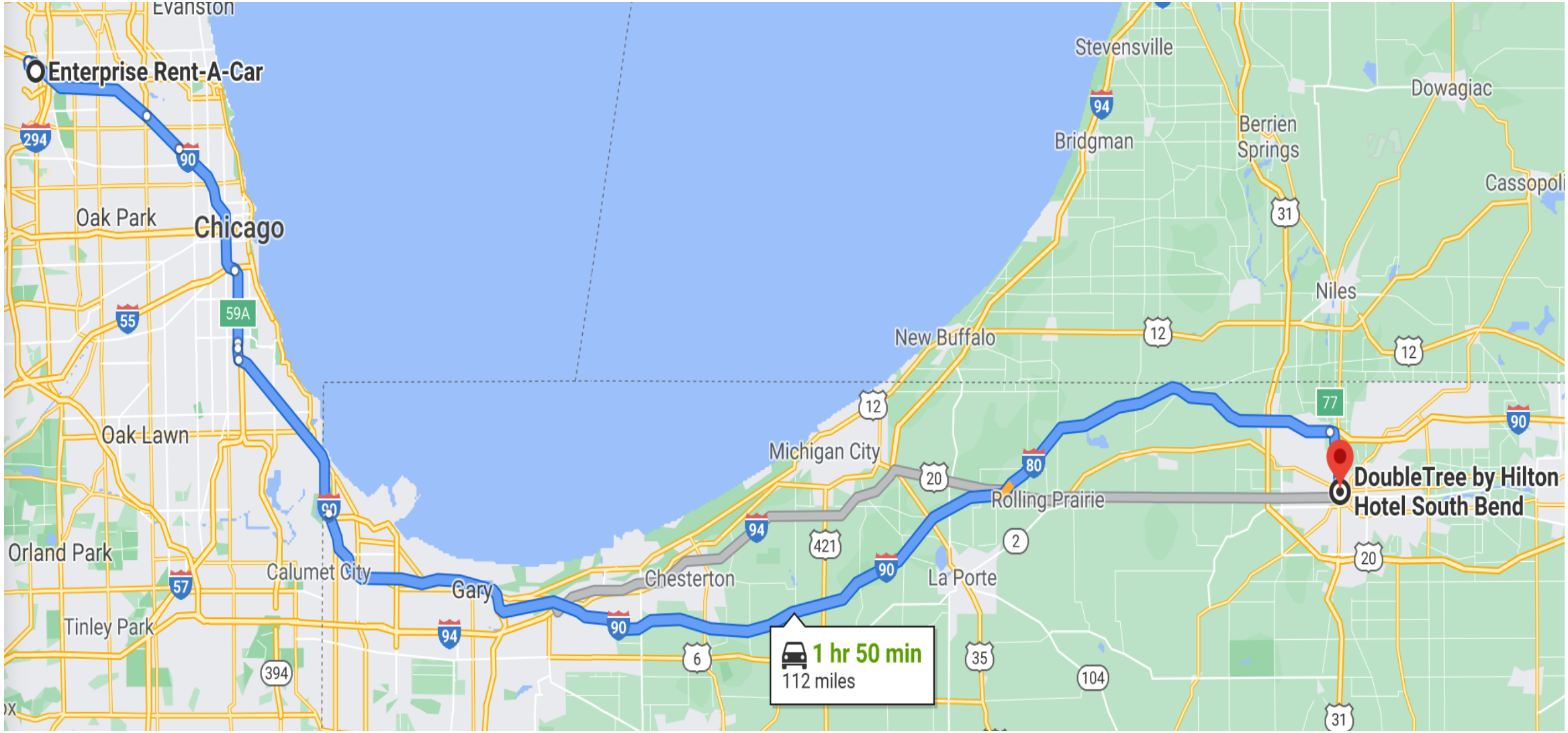
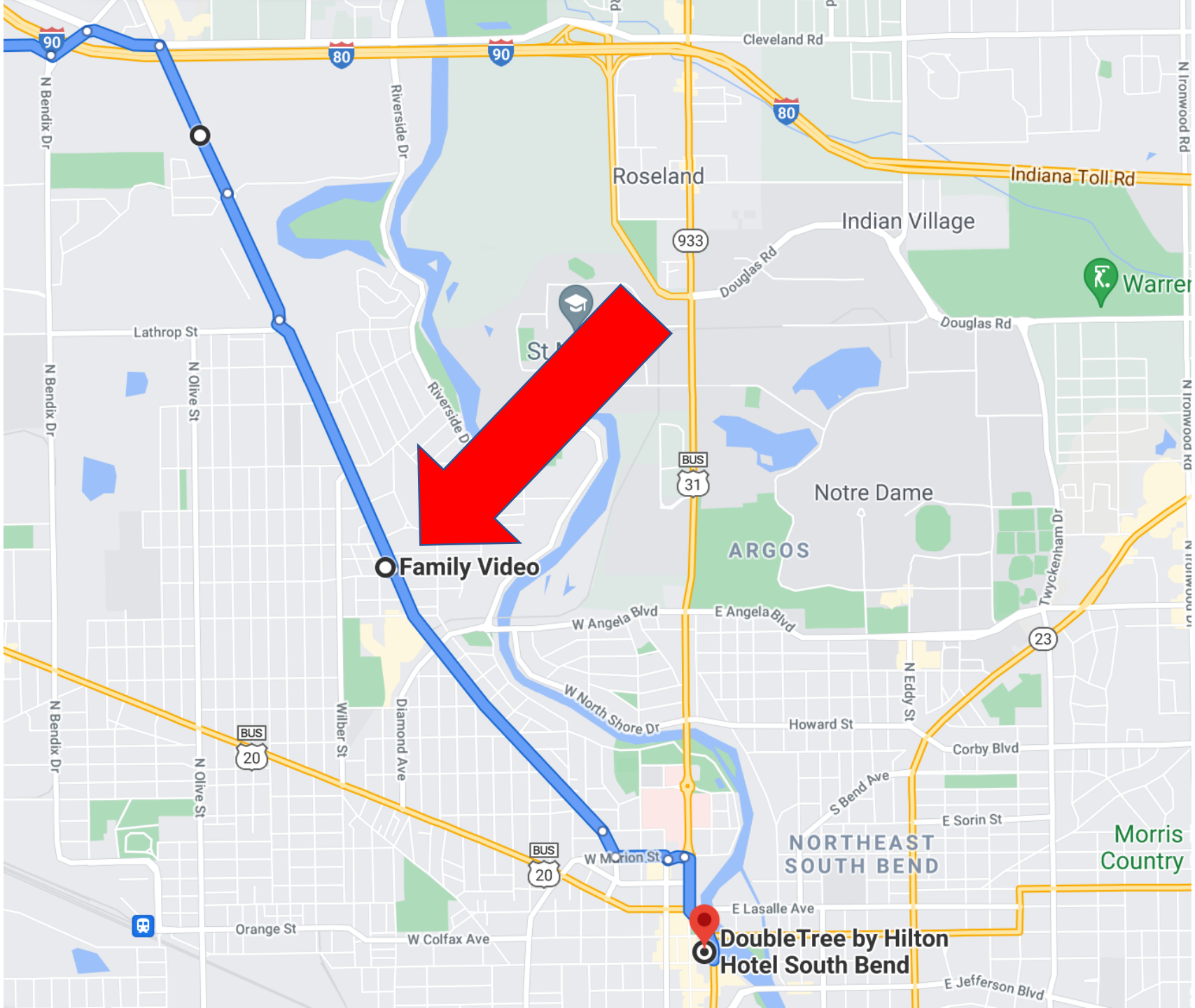

Lawrence Avenue East & Underhill Drive
1 hr 45 min
from $408
Enterprise Rent-A-Car
Brampton
Mississauga
Hamilton
Vaughan
Orillia
Kawartha Lakes
Algonquin Provincial Park
Huntsville
Manitoulin Island
Lake Huron
Lake Michigan
Lake Erie
MICHIGAN
MENOMINEE RESERVATION
Escanaba
Green Bay
Appleton
Oshkosh
Milwaukee
Kenosha
Muskegon
Grand Rapids
Holland
Saginaw
Lansing
Kalamazoo
Ann Arbor
Detroit
Chatham-Kent
London
Buffalo
Rochester
Erie
Toledo
Cleveland
Parma
Elkhart
South Bend
Naperville
Aurora
Allegheny National Forest
Quinte West
Belle

From O'Hare to South Bend Indiana




WELCOME TO
SOUTH BEND
Building a
21st Century City
Mayor Pete Buttigieg


Family Video
DoubleTree by Hilton Hotel South Bend
Cleveland Rd
Indiana Toll Rd
Roseland
Indian Village
Douglas Rd
Lathrop St
Riverside Dr
N Bendix Dr
N Olive St
Wilber St
Diamond Ave
Notre Dame
ARGOS
W Angela Blvd
E Angela Blvd
W North Shore Dr
Howard St
N Eddy St
Corby Blvd
S Bend Ave
E Sorin St
NORTHEAST SOUTH BEND
Morris Country
W Colfax Ave
Orange St
E Lasalle Ave
E Jefferson Blvd
Twyckenham Dr
N Ironwood Rd
Warren
BUS 20
BUS 31
933
23


family Video
SUBWAY IS OPEN
M-F 7-10 SAT 8-10 SUN 9-9
EAT FRESH !
family Video
SUBWAY
83000S

South Bend Indiana

South Bend Indiana

South Bend Indiana

South Bend Indiana

frog born in a well.

Pizza!

Home Made

Time to Pizza = 3 Hr

Table

Pop

Gas / Electricity

Oven

Fresh toppings

Cheese

Sauce

Dough

Know How!

Nonna’s Pizza

Pizza!

Home Made	Frozen (pre made)
Time to Pizza = 3 Hr	Time to Pizza = 20 mins
Table	Table
Pop	Pop
Gas / Electricity	Gas / Electricity
Oven	Oven
Fresh toppings	frozen toppings
Cheese	Cheese
Sauce	Sauce
Dough	Dough
Know How!	Know How!
Nonna’s Pizza	Costco

Pizza!

Home Made	Frozen	Delivery
Time to Pizza = 3 Hr	Time to Pizza = 20 mins	Time to Pizza = 45 mins
Table	Table	Table
Pop	Pop	Pop
Gas / Electricity	Gas / Electricity	Gas / Electricity
Oven	Oven	Oven
Fresh toppings	frozen toppings	standard toppings
Cheese	Cheese	Cheese
Sauce	Sauce	Sauce
Dough	Dough	Dough
Know How!	Know How!	Know How!
Nonna’s Pizza	Costco	Pizza Nova!

Pizza!

Home Made	Frozen	Delivery	Restaurant
Time to Pizza = 3 Hr	Time to Pizza = 20 mins	Time to Pizza = 45 mins	Time to Pizza = ? mins
Table	Table	Table	Table
Pop	Pop	Pop	Pop
Gas / Electricity	Gas / Electricity	Gas / Electricity	Gas / Electricity
Oven	Oven	Oven	Oven
Fresh toppings	frozen toppings	standard toppings	exotic toppings
Cheese	Cheese	Cheese	Cheese
Sauce	Sauce	Sauce	Sauce
Dough	Dough	Dough	Dough
Know How!	Know How!	Know How!	Know How!
Nonna's Pizza	Costco	Pizza Nova!	Pizzeria

Pizza!

Home Made	Frozen	Delivery	Restaurant
Cost = $6	Cost = $10	Cost = $30	Cost = $60
Time to Pizza = 3 Hr	Time to Pizza = 20 mins	Time to Pizza = 45 mins	Time to Pizza = ? mins
Table	Table	Table	Table
Pop	Pop	Pop	Pop
Gas / Electricity	Gas / Electricity	Gas / Electricity	Gas / Electricity
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No clean up!

Compute!

On Premise	Private Cloud	Compute as a Service	Public Cloud
Cost = $	Cost = $$	Cost = $$$	Cost = $$$$
Time to compute = slow	Time to compute = **faster**	Time to compute = 5 min	Time to Compute
Limited scale	Limited Scale	Scalable	Ultrascaleable
Connectivty	Connectivity	Connectivity	Global Connectivity
Electricity	Electricity	Electricity	Electricity
Facilities	Facilities	Facilities	Facilities
Security	Security	Security	Security
Network	Network	Network	Network(s)
Storage	Storage	Storage	Mass Storage
Computer	Computers	Computers	Many Choices
Know How!	**Automation**	**Automation**	**Automation**
Nonna's Pizza	Costco	Pizza Nova!	Pizzeria

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Know How!	**Automation**	**Automation**	**Automation**
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Pay per use

(Drawing) Unifying Example

of (Cloud,… and all technology)

Diagram

(IoT, 5G, Cloud, 'Big Data',
Machine Learning,
Platform, and Ecosystem
… abstraction & automation)

From Systems of Record – Old IT

- **Water heats slowly, and then it boils suddenly.**
  - Revenue Canada – Tax form evaluators
    - Tax Fraud
  - Canadian Forces Supply System Upgrade
    - Robotics Warehousing (1995)
  - Datawire / First Data / Finstra
    - Payment solutions (Internet)
    - Transaction Transport & Security
    - Transaction Fraud
  - Online Gambling
    - Royal Flush in Bristol (Twice)!
    - Comp Program – Customer Loyalty
    - Game-bot
    - (industry shared) Customer Intelligence
    - Poker Collusion – Fraud Analytics
    - Forensic Investigations
    - Platforms
  - Technopoly Inc.
    - Data stream analytics
      - Tax Return Fraud
      - Poker Fraud
      - Payment Solutions Fraud
      - Financial Fraud
  - Online Dating
    - **February 14 Scale, Plenty of Fish, downsizing, Elasticity, Automation → Cloud**
    - Chat-bots
    - Platforms
  - Eloqua (Marketing Intelligence)
    - Disruption of ”Sales” process

Systems of Engagement – involving things

- Autovision Wireless
  - Driver tracking, Geofencing
  - Internet of Things (IoT)
- American Express
  - Credit Card Authorization processing
- General Electric (GE)
  - Jet Engines (aircrafts, power generation)
  - Dynamic Power Plant Procurement Software Design
  - Capacitor Manufacturing
- CarTech - Ford
  c-v2x – Vehicle to everything data over cellular
- Silicon Valley
  - Cisco Systems – Dynamic Networks and Cyber-Security Systems
  - Sensity – Lighting, parking guidance, occupancy statistics)
  - Shot Stopper (gun shot detection and triangulation)
  - Cruise Ship (Facial Recognition, passenger tracking)\
  - Remote mining (Private 5G)
  - Law Enforcement -- Online Intelligence for “Associated” perpetrators” support for Patrol officers.
- AgriTech
  - John Deere - Iowa
  - Intelligent Farming
- Online Retail
  - Jtv.com – TV and Online jewelry sales
- Capital Markets
  - From Bottlecaps – Signal and Noise, and Signal in Noise
  - Investment Decision Making Intelligence
    - Walmart Parking Lots
    - Ship shadows
    - What investors find interesting
- Kids, curiosity, learning
  - Tic-tac-toe – a simple machine learning example.

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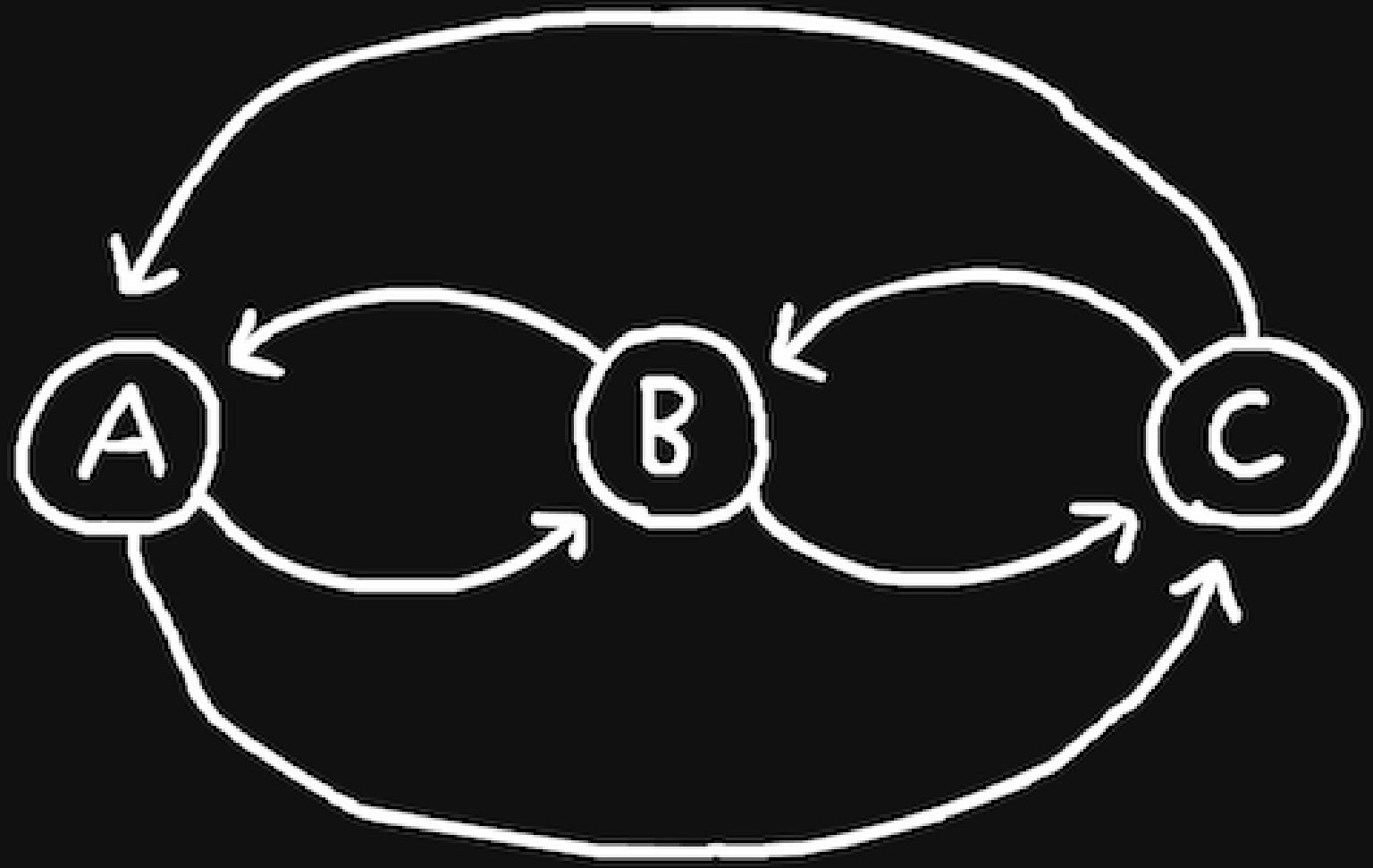
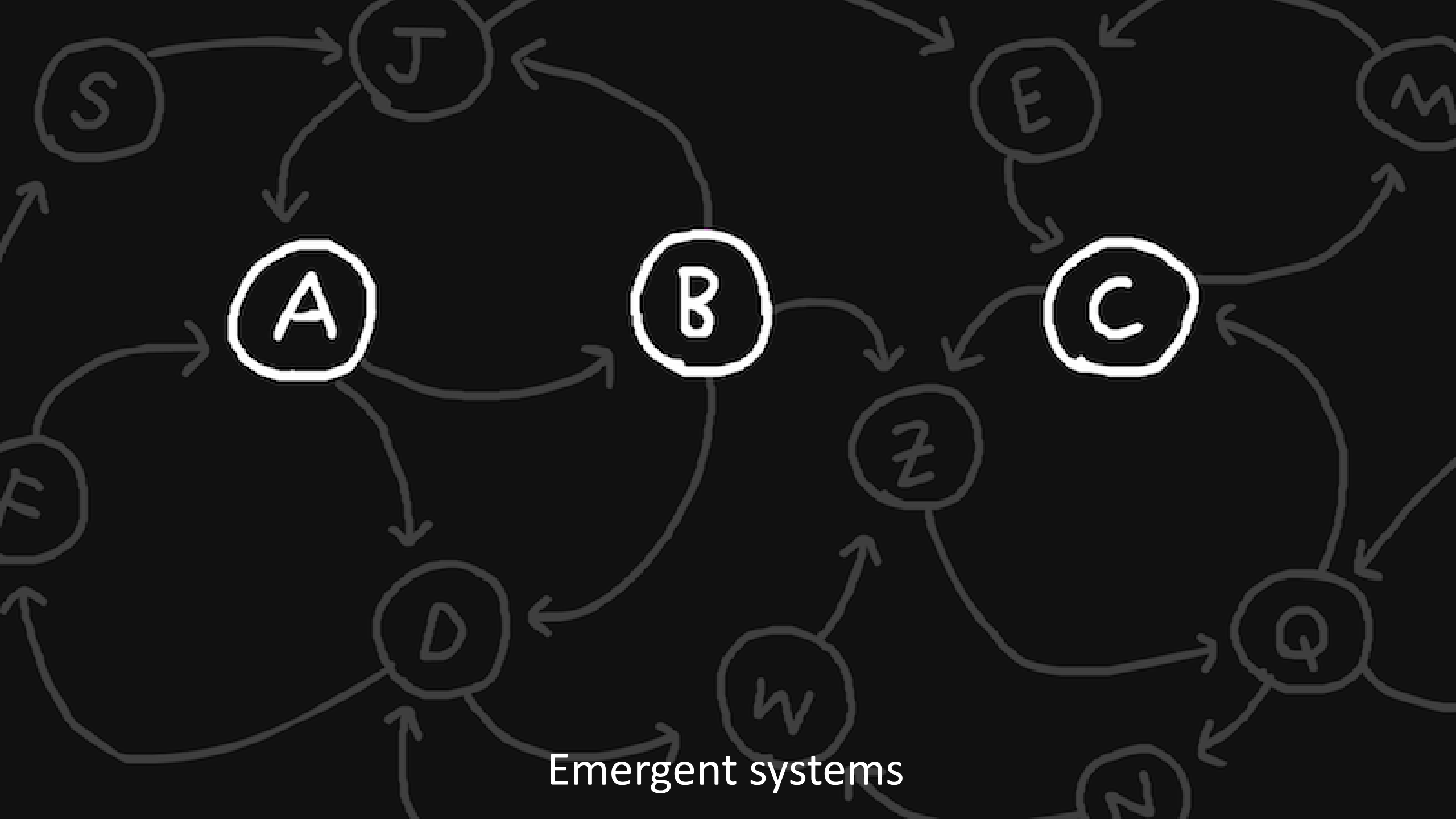
What has changed over the last decade,…

- Multiple generations
  - Boomers → GenX → Millennials → GenZ
- Hierarchical → Networked
- From Command → Collaboration
- Centralized → Distributed
  and Remote or hybrid.
- Synchronous → Asynchronous
  - “Follow-the-Sun” business
  - Online courses, assignments, learning
- Static → Dynamic
  - Gig economy
  - Deep Working
- Accelerating pace of discovery, innovation and change
- Business Models are changing
  - Subscription Model
  - Implications for need for data guided decisions.
- Linear → Loopy and Emergent systems

Linear systems



interdependent systems



Emergent systems

Transformation

Muscle → Mechanical

WHY?

Transformation

Muscle → Mechanical → Steam

WHY?

Transformation

Muscle → Mechanical → Steam → Electrical

WHY?

Transformation

Muscle → Mechanical → Steam → Electrical → Digital

- Marketing has gone Digital
- Manufacturing is going Digital
- Supply Chains are Digital
- Governments going Digital!
  - Digital Identity
  - Internet Connectivity for citizens
  - From systems of Record → systems of engagement
- City infrastructure is going Digital Banking going Digital
- Digital Banking (Open Banking)
- Trust is going Digital
  - Distributed Trust systems (Block-Chain), Ledgers
- Health is going digital
  - Records
  - Research
  - Prescriptions
- Dating is largely Digital
- Gambling is digital
- …

WHY?

Transformation

Muscle → Mechanical → Steam → Electrical → Digital → Networked → Intelligent → Emergent

Major Themes

1. Data collection, analytics
2. Data guided decisions
3. Abstraction
4. Automation

How do I participate in “the Digital” world?

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- **Personal Habits**
- **Enterprise habits**
- **Team-ship Habits**
- **Career Habits**

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- **Personal Habits**
  - Olifantenpaden → Goat Trails
  - Oikeiosis
  - Lead (and follow)
  - Read people (Emotional Intelligence
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- **Personal Habits**
  - Make learning a hobby!
    - Comfortable with ambiguity
    - Embrace the Discomfort of Not Knowing
    - Distinguish Between Complicated and Complex
    - Let Go of Perfectionism
    - Don’t Go It Alone
    - Go as far as your eyes can see and you will see more.
  - Systems Thinking
    - Move from “the dance floor to the balcony” from time to time
  - Critical Thinking
    - (sort fact from fiction)
  - Cognitive Flexibility
    - Reflect and revise mental models from time to time.
  - Computational Thinking
    - Analysis – break it down into understandable chunks and understand how they are related / connected.
    - Create your first algorithm (for scale)
    - Write at least one program (demystify computing for yourself – it will help with anxiety).
- **Team-ship Habits**
  - Communication, Collaboration skills
  - From Truth finding to Value adding.
  - Building Trust
  - Understand people – Improv!
  - From “but” → “… yes and”
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- **Enterprise habits**
  - Do your Job (but not just your job)
  - Understand the big picture
  - Learn how money is being made.
  - Understand your customer.
  - Net Promoter Score (NPS).
- Keep in the “FLOW” zone.

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    - Reflect and revise mental models from time to time.
  - Computational Thinking
    - Analysis – break it down into understandable chunks and understand how they are related / connected.
    - Create your first algorithm (for scale)
    - Write at least one program (demystify computing for yourself – it will help with anxiety).
- **Team-ship Habits**
  - Communication, Collaboration skills
  - From Truth finding to Value adding.
  - Building Trust
  - Understand people – Improv!
  - From “but” → “… yes and”
- **Career Habits**
  - über den tellerrand schauen
    - Olifantenpaden (desire paths) → Goat Trails
    - Oikeiosis
    - Lead (and follow)
    - Read people (Emotional Intelligence)
- **Enterprise habits**
  - Do your Job (but not just your job)
  - Understand the big picture
  - Learn how money is being made.
  - Understand your customer.
  - Net Promoter Score (NPS).
- Keep in the “FLOW” zone.

How do I participate in “the Digital” world?

- **Personal Habits**
  - Make learning a hobby!
    - Comfortable with ambiguity
    - Embrace the Discomfort of Not Knowing
    - Distinguish Between Complicated and Complex
    - Let Go of Perfectionism
    - Don’t Go It Alone
    - Go as far as your eyes can see and you will see more.
  - Systems Thinking
    - Move from “the dance floor to the balcony” from time to time
  - Critical Thinking
    - (sort fact from fiction)
  - Cognitive Flexibility
    - Reflect and revise mental models from time to time.
  - Computational Thinking
    - Analysis – break it down into understandable chunks and understand how they are related / connected.
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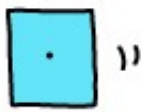
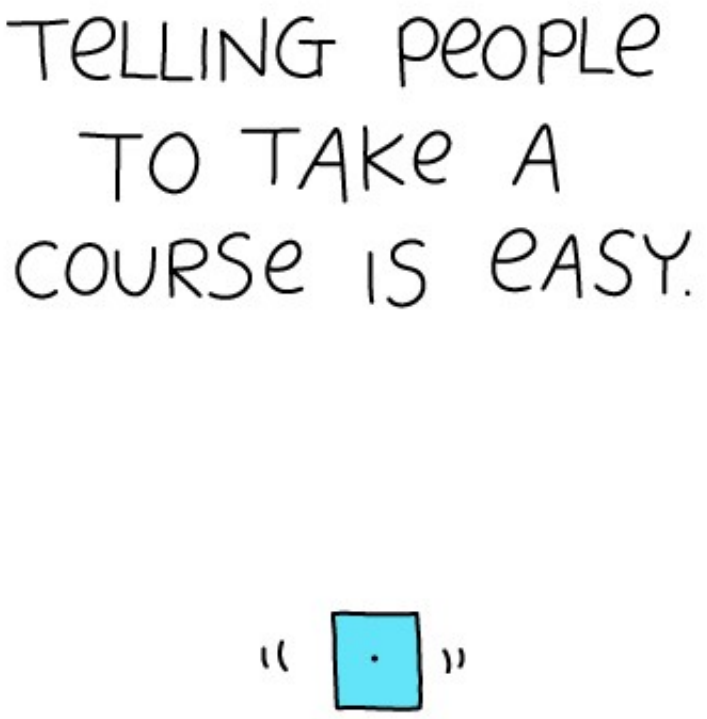
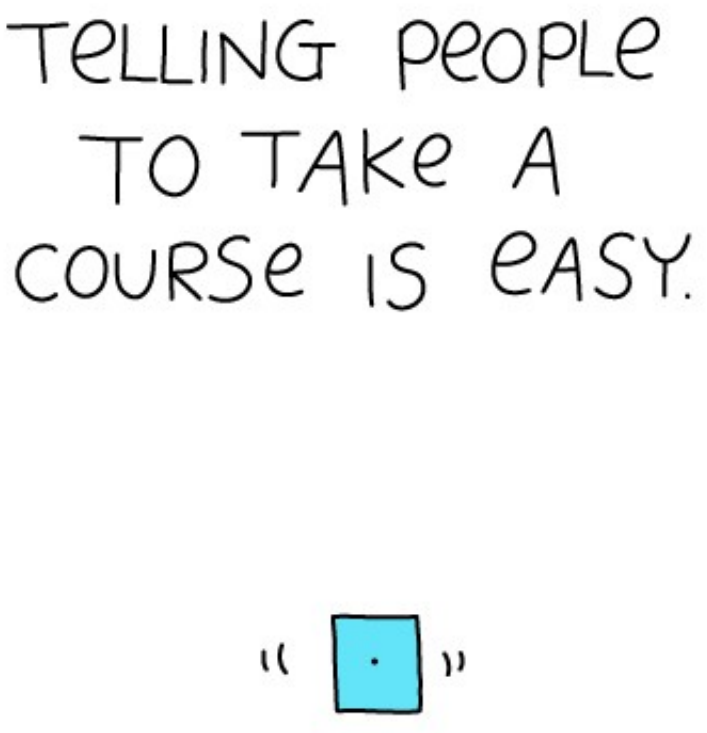
TELLING PEOPLE TO TAKE A COURSE IS EASY.

"  "

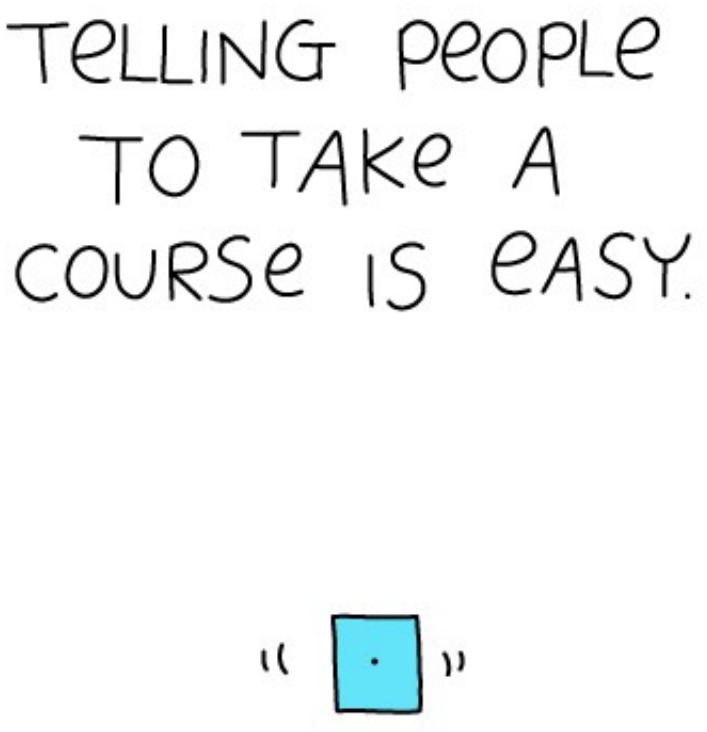


- Major Universities
  - MIT Online
  - Stanford Online
  - Harvard Online
- EDx
- Coursera
- YouTube
- …

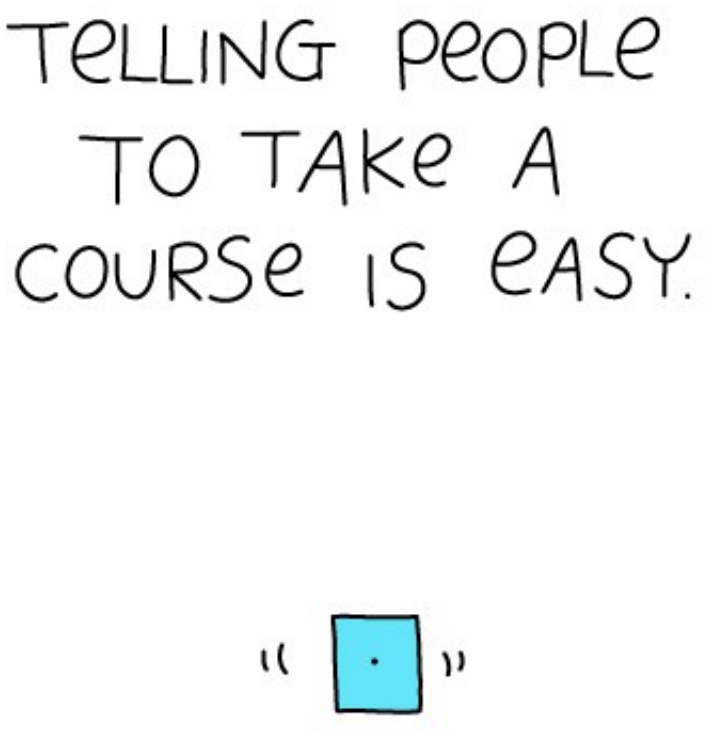


- Major Universities
  - MIT Online (free)
  - Stanford Online (free)
  - Harvard Online (free)
- EDx (free)
- Coursera (free)
- YouTube (free)

(you will need a computer and a highspeed internet connection)



- Major Universities
  - MIT Online
  - Stanford Online
  - **Harvard Online CS-50**
- EDx
- Coursera
- YouTube



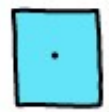
Harvard CS-50 Fall 2021

Introduction to the intellectual enterprises of computer science and the art of programming. **This course teaches students how to think algorithmically and solve problems efficiently.** Topics include abstraction, algorithms, data structures, encapsulation, resource management, security, software engineering, and web programming. Languages include C, Python, and SQL plus HTML, CSS, and JavaScript. Problem sets inspired by the arts, humanities, social sciences, and sciences. Course culminates in a final project. Designed for concentrators and non-concentrators alike, with or without prior programming experience. **Two thirds of CS50 students have never taken CS before.** Among the overarching goals of this course are to **inspire students to explore unfamiliar waters, without fear of failure,** create an intensive, shared experience, accessible to all students, and build community among students.

COLLABORATION IS HARD.

“  ”

TELLING PEOPLE TO TAKE A COURSE IS EASY.

“  ”

Education isn’t,…

Education isn’t,…

Something you can finish.

Education isn’t,…

Something you can finish.
-- Isaac Asimov

Education is something,…

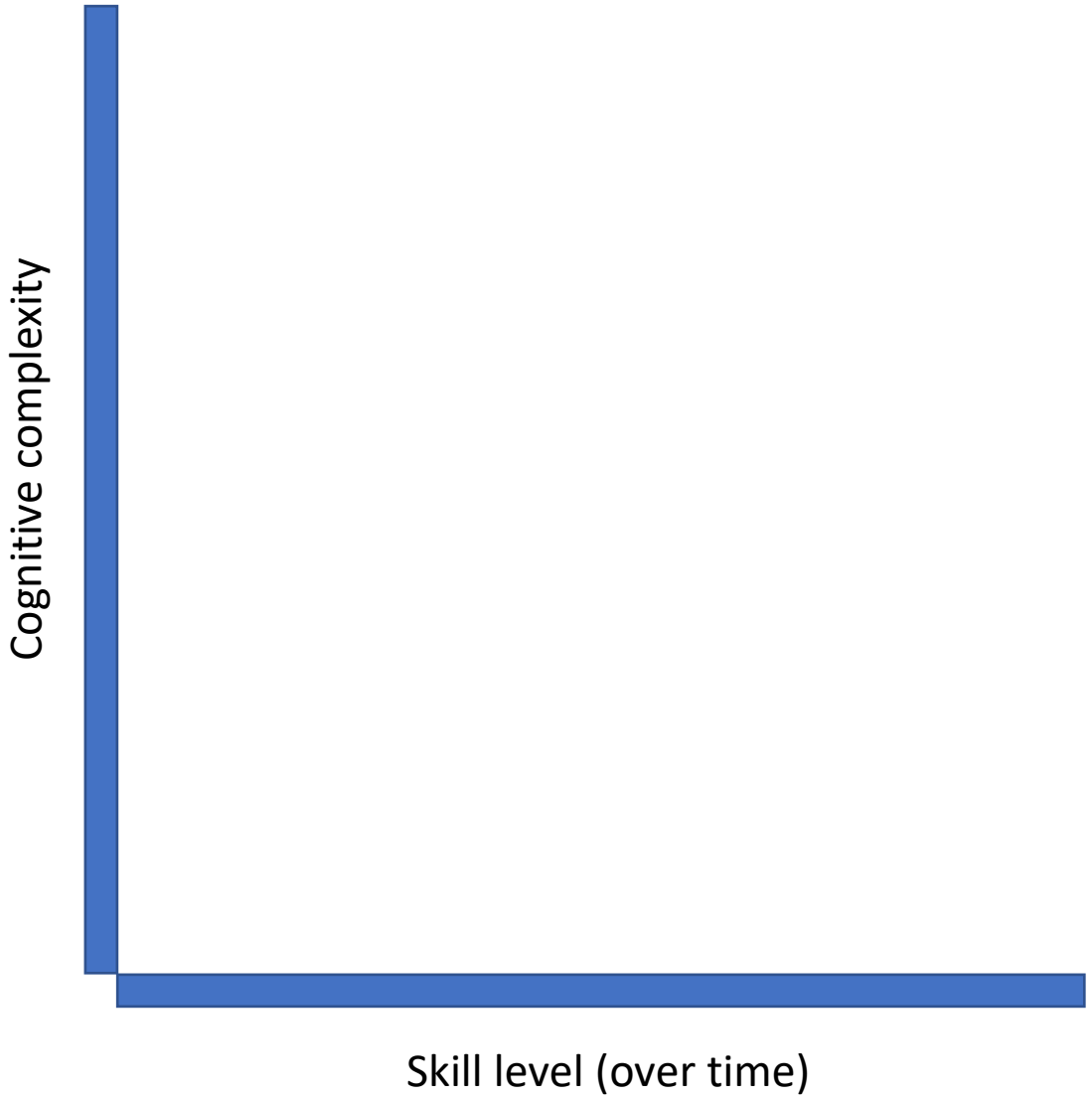
you can only start !

Education is something,…

you can only start !

Take on learning as a hobby

Finding FLOW



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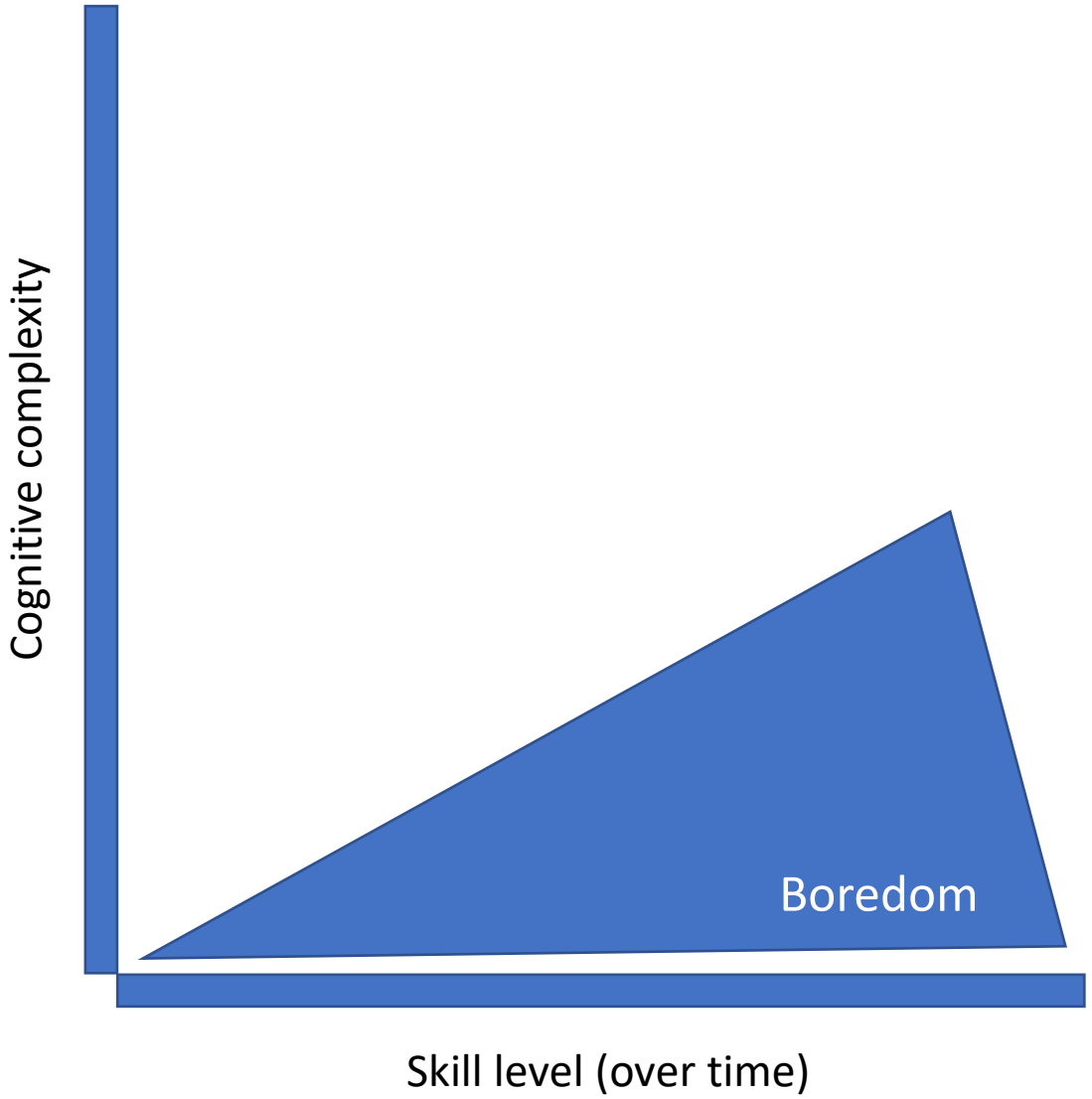

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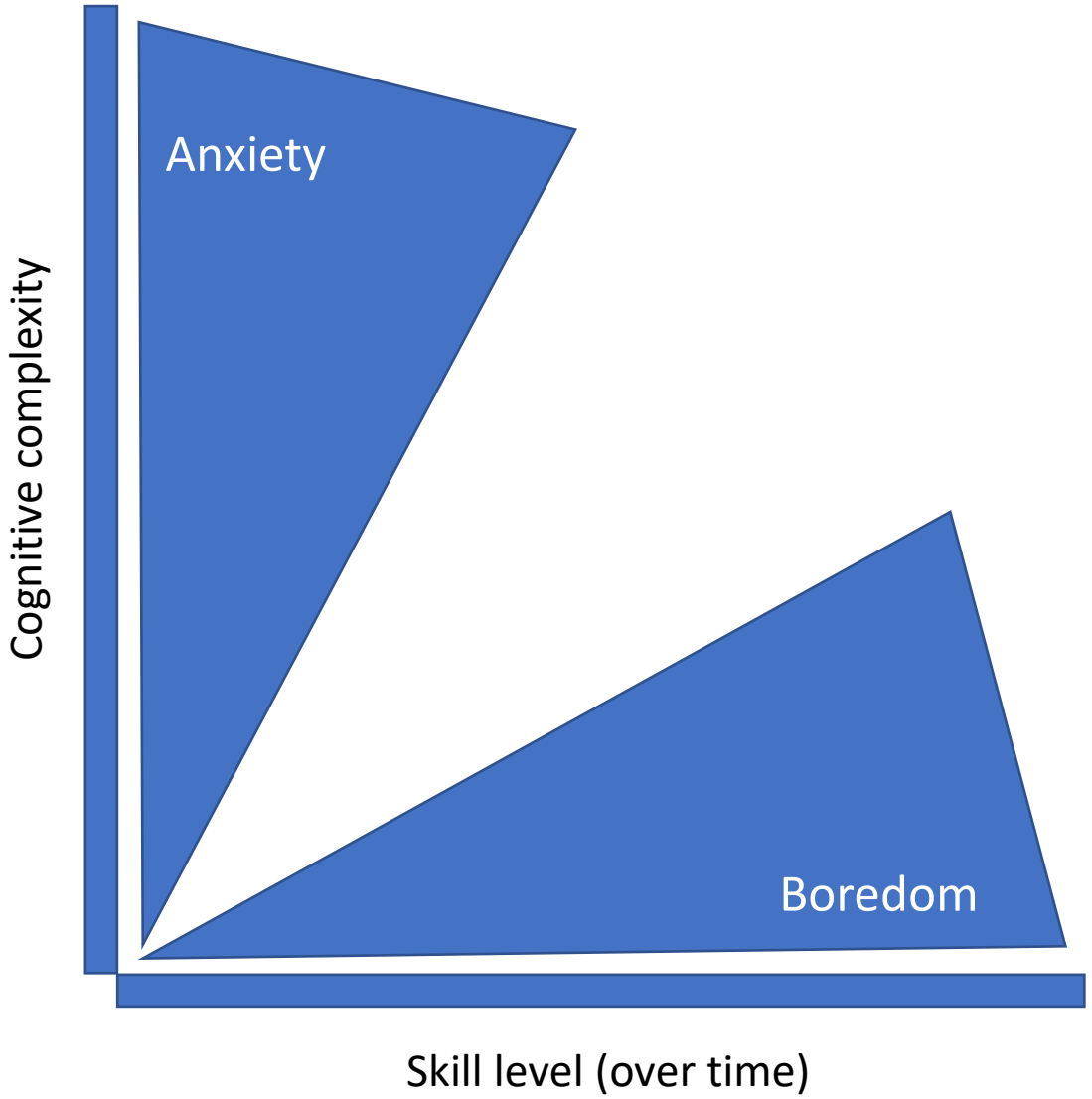

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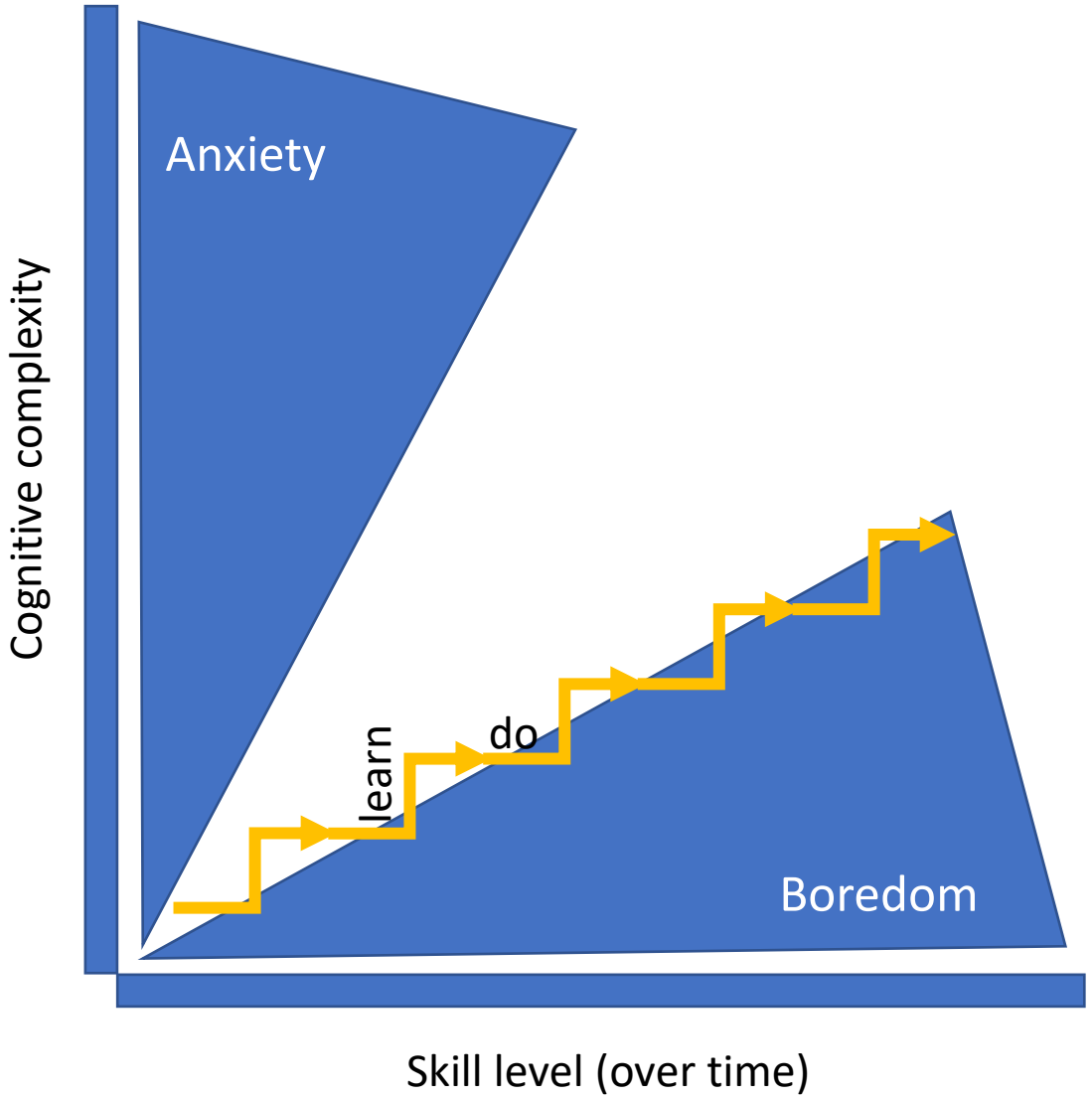

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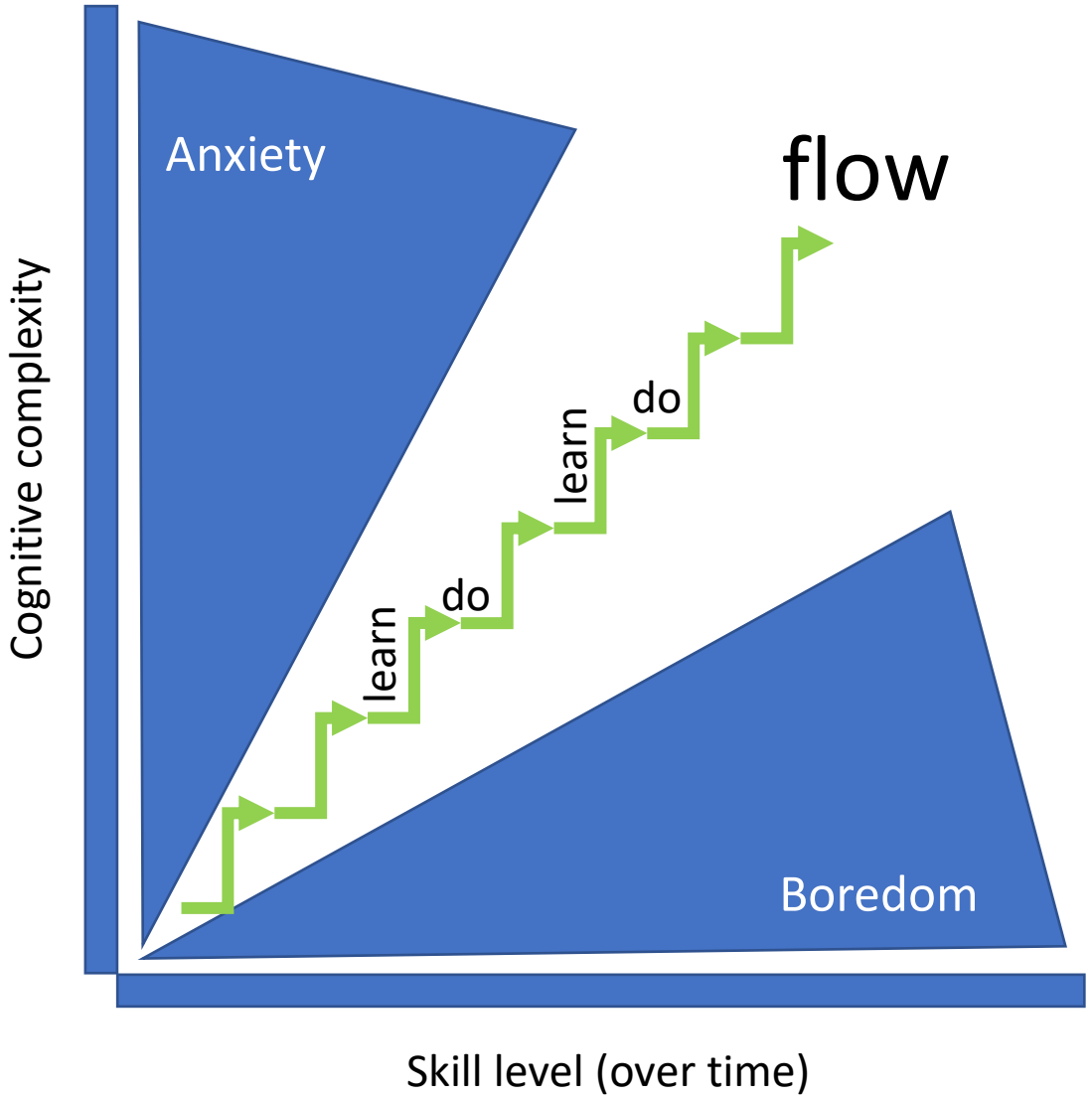
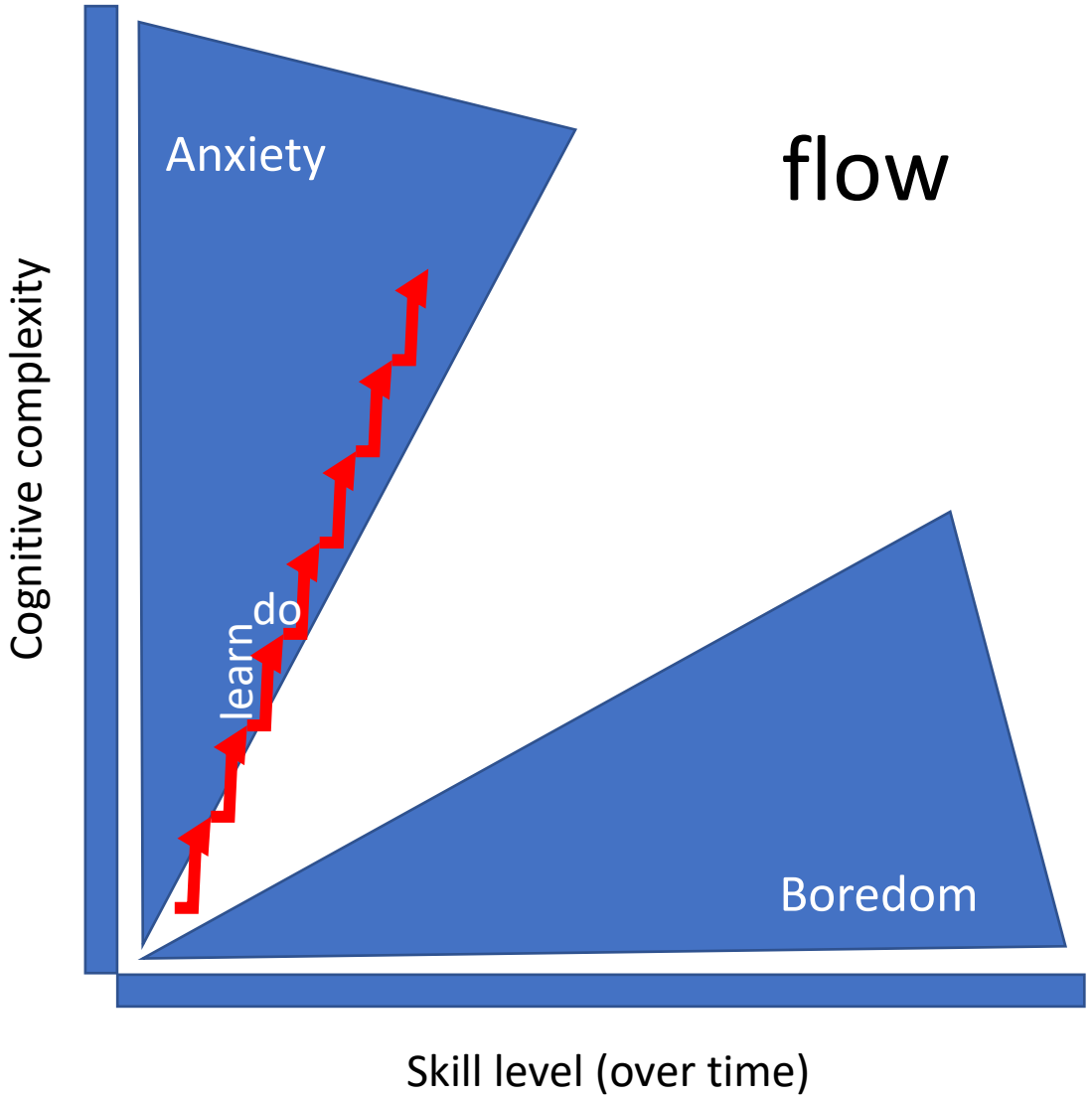
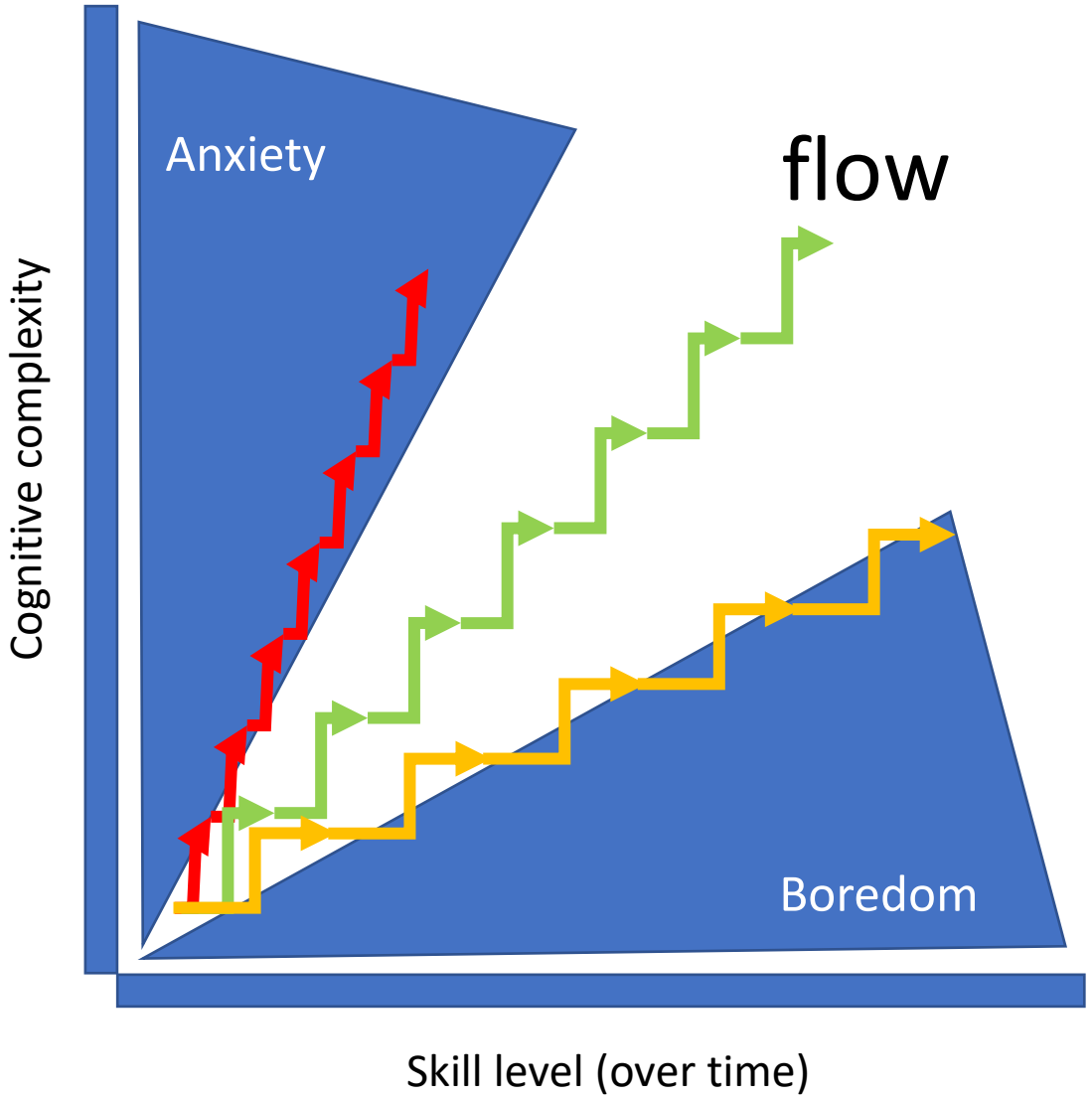


It feels good!

Staying in FLOW



Staying in FLOW



Education is something,…

you can only start !

Take on learning as a hobby
become an **agile learner.**

4 C’s of 21st Century Skills

- Critical Thinking
- Curiosity
- Computational Thinking
- Community & Connection

4 C's of 21st Century Skills

- Critical Thinking
- Curiosity
- Computational Thinking:
- a set of problem-solving methods that involve expressing problems and their solutions in ways that a computer could also execute.

4 C's of 21st Century Skills

- Curiosity
- Computational Thinking
- Community & Connection
- **Critical Thinking**
  - Characteristics
    - Think for yourself
    - Question what you hear or read
    - Discover the truth for yourself
  - Ask "Why"
  - Lifetime of thinking and learning independently
  - Hone your decision-making skills

5 C's of 21st Century Skills

- Curiosity
- Computational Thinking
- Community & Connection

- **Creativity**

- Critical Thinking
  - Characteristics
    - Think for yourself
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  - Ask "Why"
  - Lifetime of thinking and learning independently
  - Hone your decision-making skills

5 C's of 21st Century Skills

- Curiosity
- Computational Thinking
- Community & Connection

- **Creativity**
  - Thinking outside the box
    - Art
    - Music
    - Literature
  - Think in ways that others do not or cannot
  - Necessary ingredient for Problem Solving
- Critical Thinking
  - Characteristics
    - Think for yourself
    - Question what you hear or read
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  - Ask "Why"
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6 C's of 21st Century Skills

- Curiosity
- Computational Thinking
- Community & Connection
- **Confidence & Courage (over Fear)**
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- Computational Thinking
- Community & Connection
- Confidence & Courage (over Fear)
- Creativity
  - Thinking outside the box
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    - Music
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- **Comedy (specifically Improv!)**

8 C's of 21st Century Skills

- Curiosity
- Computational Thinking
- Community & Connection
- Confidence & Courage (over Fear)
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  - Hone your decision-making skills
- **Communication Skill**
  - Convey ideas in an appropriate manner for the situation at hand.
    - Ability to communicate for action - Minto
    - Ability to tell a story
  - Beyond writing skills, online media skills, presentations, multimedia, video conferencing, remote working
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  - Ask "Why"
  - Lifetime of thinking and learning independently
  - Hone your decision-making skills
- **Collaboration & Cooperation**
  - Working in a group
  - Building rapport, understanding strengths and weaknesses, styles for creativity, communication, critical thinking
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10 C's of 21st Century Skills

- **Cognitive Flexibility** – Expecting and adapting to a changing world.
  - Also known as a Growth Mindset (Carol **Dweck**)
- Curiosity
- Computational Thinking
- Community & Connection
- Confidence & Courage (over Fear)
- Creativity
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- **Character**
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12 C's of 21st Century Skills

- Change Mindset – Expecting and adapting to a changing world.
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- **Create a plan …**

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  - **Remember Merlin Factor**
  - **Keep the plan adaptable**

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Someone new
Someone old
Someone borrowed
Someone blue

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Someone new
Someone old
Someone borrowed
Someone blue

**(The new broom sweeps clean,
The old broom knows the corners.)**

communication, critical thinking

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  - Convey ideas in an appropriate manner for the situation at hand.
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    - Ability to tell a story
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Create a plan …

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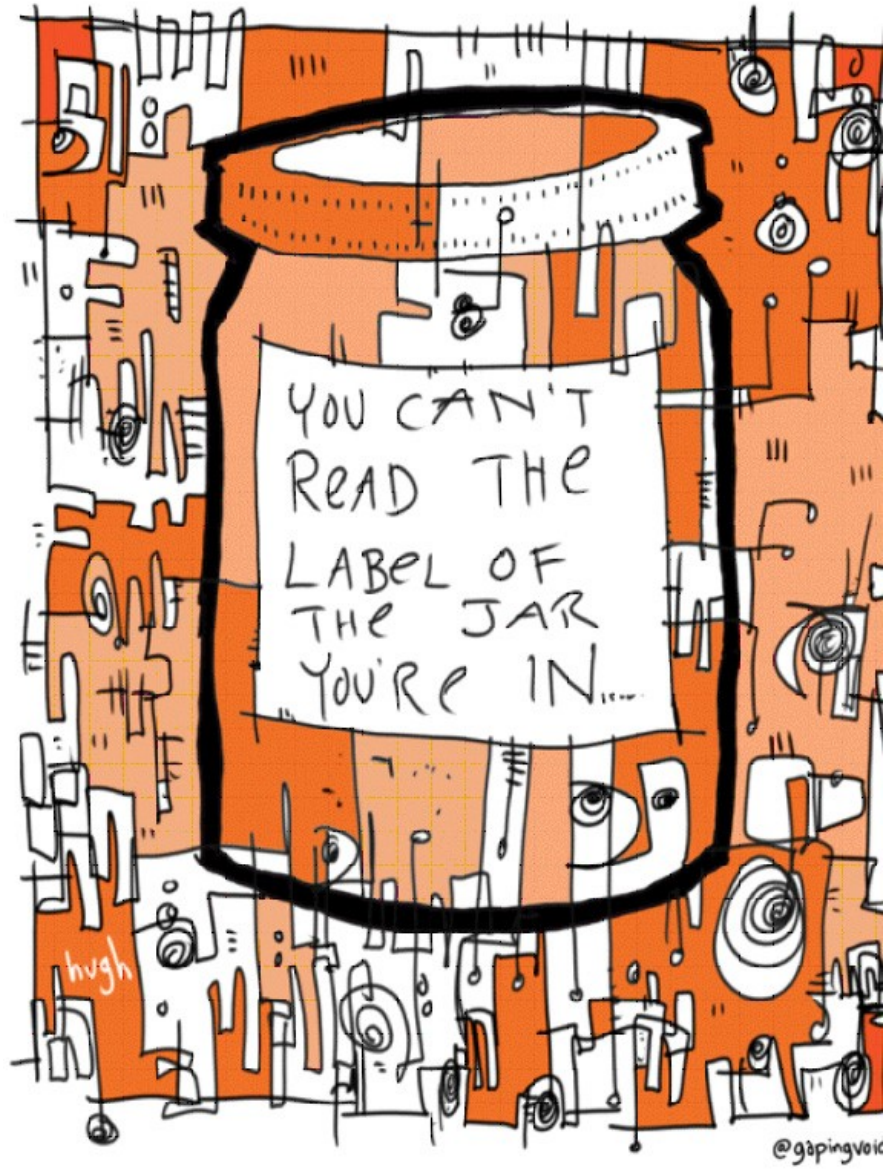
Questions


YOU CAN'T READ THE LABEL OF THE JAR YOU'RE IN...
hugh
@gapingvoid


Thank you
”Chance favours the connected.”
karim.virjee@vliberty.com
https://www.linkedin.com/in/kvirjee

Challenges to Cognitive Flexibility

- **Memory**
- If you're solving a problem, you might choose the obvious path or you might recall a similar challenge from your past or a story a friend told you about solving a similar challenge or something you saw in a film. The act of using a memory from a past to solve a current problem—not because you've encountered this problem before but because you are able to make a connection between this one and a different one (detect a pattern)—this ability is at the heart of cognitive flexibility.
- It's the same process going on when you hear someone's story and you respond with your own, recognizing a similar theme. This is harder than it sounds. You might have a better, more relevant story—but you can't remember it at the moment. Improving your ability to remember it would be enhancing cognitive flexibility. As would improving your ability to recall relevant facts/things you've read when someone brings up a specific topic in conversation.
- To think flexibly, you must be able to draw from multiple reserves of knowledge and memory to engage with a task or problem. You need an ability to reach deeply into the past and not just draw your immediate reserves, which requires a very good declarative memory.
- Being able to see all possible relevant experiences or bites of knowledge at once and choose best response based on all of those, but most of us can't recall enough in the moment…how do we improve at that function?
- "We remember things because they either stand out, they relate to and can easily be integrated in our existing knowledge base, or it's something we retrieve, recount or use repeatedly over time," explains Sean Kang, PhD, assistant professor in the Department of Education at Dartmouth College.
- **Confirmation Bias**
- As we get older, we sometimes get fixed in our way of thinking and struggle to latch onto truly new ideas. We tend to shape them to match info we already know and therefore miss out on the really valuable part of learning.
- **Salience**
- There's an entire part of the brain, the Salience Network, devoted to noticing things which stand out in our environment. It requires cognitive flexibility to determine which of these things are worth paying attention to.
- "Our brain is constantly bombarded by sensory information, and we have to score all that information in terms of how personally relevant it is for guiding our behavior," says William Seeley, a neurologist at the University of California, San Francisco.
- **Myopia**
- You know that point in a conversation when you start thinking, "This is boring, small talk, things we've sort of talked about before"? Cognitive flexibility is being able to flex a brain muscle and push the curtains aside and look out the window toward a more interesting conversation topic. Many of us just stay in the mill pond or go farther down the rabbit hole rather than stepping back and trying to sway things in a more interesting direction. Most of us just go with the flow, which is fine. But true cognitive flexibility would be directing this flow in a way that's valuable to you and your fellow convo participants. To be able to judge what you know that could be most useful to the people you're talking to in that moment—that's cognitive flexibility.
- **Low latent inhibition**
- Latent inhibition is the name for the fact that it takes us longer to prescribe meaning to a familiar stimulus than to a new stimulus. For example, we may pass by the same houses on our street every day and prescribe little meaning to them unless our attention is drawn to them for a particular reason. This is normal, and allows our brain to ignore old information so it can focus on new information. Some people, however, have what's called low latent inhibition, which means they have a harder time placing those houses in the category of "old information" and moving on. Individuals with autism become easily overwhelmed by stimuli that other people consider familiar. Poets, writers, and other artists also tend to get caught up in the details of things, which allows for greater creativity but also may sometimes prevent the brain from seeing the bigger picture or moving on.
- **Information bottleneck**
- Sometimes our cognitive flexibility suffers because we've got so much on our mind or so much information or experience stored in our knowledge reserve that a bottleneck occurs. Like cubes of ice blocking the flow of water out of a bottle, the possible pieces of information we could bring to a situation is so great that nothing comes to mind at all. We'll offer a few ways to overcome this phenomenon in the next section.
- **Rigid thinking**
- Rigid thinking is the opposite of cognitive flexibility. It's what defines mental conditions like depression and anxiety: We get stuck in a loop of rumination and can't seem to think about things a different way. Becoming aware of the pattern of our own thoughts is a huge step forward in seeing things from a new angle and feeling more positive about the world.
- **Reinforcement**
- Thinking is like walking: you leave a print wherever you go, and the path becomes increasingly well-trodden the more you go down it. Neural pathways are the same way. Our brain remembers what we reinforce in our neural pathways, so if we're using the same facts or telling the same stories all the time, we're branding our neural pathways with them, which means we may end up repeating the same story to the same person and responding with less cognitive flexibility to situations and tasks.

How to Improve Cognitive Flexibility?

- **How to Improve Cognitive Flexibility?**
- **1. Pay attention to your thoughts**
- Where does your mind go (or not go) when you're called upon to share knowledge or experience?
- **2. Be intentional**
- Ask yourself some questions: What do you want to know? What do you want to talk about?
- **3. Create categories**
- Create mental categories for information and situations ahead of time so that you can more easily organize your experience. While reading the news, place article headlines into mental categories such as Environment, Politics, Arts, etc. so that you can easily pull up the information later on.
- **4. Align encoding and retrieval cues**
- Think about the functional meaning of the info, which context you'll apply it to, and that will help you remember it when you need it. "Number one reason why start-ups fail isn't cash flow but fact that people don't want the product."
- **5. Record your experience**
- Do a brain dump. Research says that if we unload our worries it frees up more space in our brain to think of other things throughout the day, therefore promoting greater flexibility.
- **6. "If you understand it, you'll remember it."**
- A friend told me this one recently and I think there's a lot of truth to it. Oftentimes we have trouble recalling concepts because we don't understand them as well as we thought we did.
- **7. Physical exercise**
- After only twenty minutes of intensive exercise, your brain releases dopamine, serotonin, opioids, endorphins, neurotrophics, and endocannabinoids—feel-good chemicals that allow the body and brain to learn and grow. For evolutionary reasons, the body is primed to learn while exercising. Exercise also enhances focus and lowers anxiety. Over time, it stabilizes mood, increases the size of the hippocampus, and promotes neurogenesis. All of these things enhance cognitive flexibility.
- **8. Learn new skills**
- Learning new skills promotes mental flexibility. Try picking up a musical instrument, a new foreign language, or learning a new game.
- **9. Shake up your routine**
- To keep the mind sharp and flexible, introduce new things into your routine. New stimuli promote mental flexibility because they force your brain to adapt quickly. Travel is great for this, but you can also simply take a new route home from work or go for a walk in a neighborhood you haven't explored before. Occasionally surrounding yourself with people who are unlike you is also a good way to push your brain into making new connections.
- **10. Cultivate humor**
- Quick-wittedness is a sign of cognitive flexibility. When we make a joke, it means we're able to step back and see the bigger picture rather than getting caught up in the literal meaning of the situation. Finding the humor in a variety of situations is an exercise in flexible thinking.