CLARK UNIVERSITY

CHALLENGE CONVENTION.
CHANGE OUR WORLD.

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Hello! I focus on equipping students with system, fundamental to advanced coding, and data transformation abilities.

At present, I instruct foundational computer science topics, ranging from machine and assembly to C++ via patt/patel. My expertise spans theoretical system design, practical re-engineering, data transformation in Python and R, STEM communication, and curriculum development. I'm grateful for my quality master's in applied data science which enhanced my ability to develop quality graduate courses, such as COSC-526 Data Mining with Spark, at www.utk.edu.

My teaching philosophy emphasizes active learning through tools like Colab, Google Sheets, and Github. Students engage in weekly JAMs, connecting fundamental concepts like data transformation, iterators, and class objects. I also provide codebooks in every class to expose students to algorithms, statistical analysis, and machine learning, similar to proven methods I learned to perform building module Get Started with Python in Google's advanced data analytics course in Coursera.

I work to transform course materials into interactive workspaces that integrate theory, methods, and programming into learning objects. Algorithmic pattern processing is stretching binary mechanisms capabilty as pattern learning interacts upon itself rescripting rules like in 2016 when Google's Deep Mind research used deep neural netword feeding algorithms with 30 million moves from expert players and then added reinforacement learning resulting in the AlphaGo's creation of Move 37 that beat master Go player Lee Sedol [1].

My students learn to actively reshape information into actionable commodities to help prepare them for dynamic technology relationships such as generative pretrained transformer (GPT) bots and AI agents offer. Lacanian REAL is transforming into a Krokeresque new.REAL where there could be unprecedented job elimination from GPT tech democratization.

Students need dramatic skilling in higher principles, such as ontoloogical formation and advancing reasoning to perform logic deduction to ask AI the right question using the correct lantguage to advance their solving. My efforts focus on increasing this fungability and to facilitate upskilling and recall mnemonics, my teaching infrastructure includes

  i. Converting lecture audio to text and integrating it into the class corpus.
  ii. Employing GPT tech to synthesize disparities, including lecture notes and textbooks.
  iii. Emailing the disparity index and aggregating media into a central repository.
  iv. Feeding the repository into a course-specific AI agent, further supporting student tasks.
  v. Immersing students in what may feel like a new tech skin and solving fabric of new.REAL mechanisms.

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google.learning.lab.Get.Started.w.Python	

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THE ART OF
MACHINE LEARNING

instructor.brian's.lecture.thematic

Melitologic and arachnids, honeybee and orb-weaver spiders, inspire my adaptive learning approaches and serve as an ongoing lecture thematic to help bridge students to higher principal thinking by understanding creature visual, cooperation, and structural adaptations such as
o   A worker bee signals a sentry to clean a mite instead of infecting the hive indicating health consciousness, unity, and collective intelligence.
o   Spiders weave adaptive stabilimentum patterns to decoy from a predator's perception and even cloak their abdomen or cephalothorax in plain sight.

Arachnids => Antipredator strategies and visual asecthics

Robledo-Ospina, Luis, et al. Visual Antipredator Effects of Web Flexing in an Orb Web Spider, with Special Reference to Web Decorations. *Die Naturwissenschaften* 110.3 (2023): 23. *ProQuest*. Web. 18 Aug. 2023.

Abstract Some visual antipredator strategies involve the rapid movement of highly contrasting body patterns to frighten or confuse the predator. Bright body colouration, however, can also be detected by potential predators and used as a cue. Among spiders, Argiope spp. are usually brightly coloured but they are not a common item in the diet of araneophagic wasps. When disturbed, Argiope executes a web-fexing behaviour in which they move rapidly and may be perceived as if they move backwards and towards an observer in front of the web. We studied the mechanisms underlying web-fexing behaviour as a defensive strategy. Using multispectral images and high-speed videos with deep-learning-based tracking techniques, we evaluated body colouration, body pattern, and spider kinematics from the perspective of a potential wasp predator. We show that the spider's abdomen is conspicuous, with a disruptive colouration pattern. We found that the body outline of spiders with web decorations was harder to detect when compared to spiders without decorations. The abdomen was also the body part that moved fastest, and its motion was composed mainly of translational (vertical) vectors in the potential predator's optical fow. In addition, with high contrast colouration, the spider's movement might be perceived as a sudden change in body size (looming effect) as perceived by the predator. These effects alongside the other visual cues may confuse potential wasp predators by breaking the spider body outline and afecting the wasp's fight manoeuvre, thereby deterring the wasp from executing the final attack. Keywords Deimatic displays·
High-contrast visual cues· Secondary defensive strategies.

Stabilmentum

A **stabilimentum** (plural: **stabilimenta**), also known as a **web decoration**, is a conspicuous silk structure included in the webs of some species of orb-web spider. Its function is a subject of debate.

Baltimoreandohiorr(2019),
https://www.youtube.com/watch?v=kNzg0PCVMqk
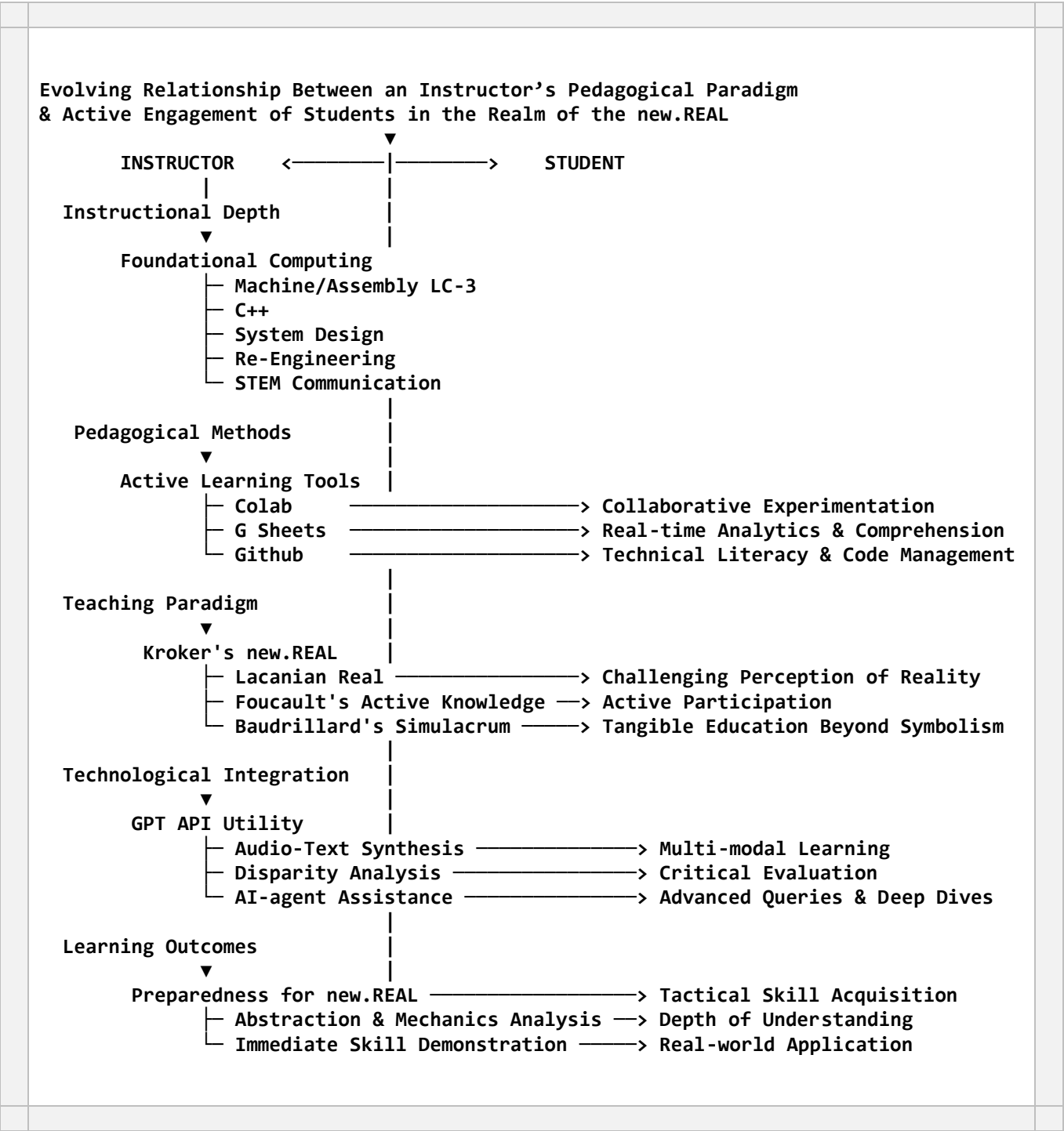

https://en.wikipedia.org/wiki/Stabilimentum

GPT.ASCII.diagram.generated.schematic

- GPT performs remarkably well with ASCII information representations.
- I craft DeepLearning.AI templates to facilitate this form of information exchange of all lectures for students.

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Evolving Relationship Between an Instructor's Pedagogical Paradigm
& Active Engagement of Students in the Realm of the new.REAL
                              ▼
          INSTRUCTOR     <————————|————————>     STUDENT
                |                  |
    Instructional Depth            |
                ▼                  |
          Foundational Computing   |
                  ├─ Machine/Assembly LC-3
                  ├─ C++
                  ├─ System Design
                  ├─ Re-Engineering
                  └─ STEM Communication
                                   |
      Pedagogical Methods          |
                ▼                  |
          Active Learning Tools    |
                  ├─ Colab      ——————————————> Collaborative Experimentation
                  ├─ G Sheets   ——————————————> Real-time Analytics & Comprehension
                  └─ Github     ——————————————> Technical Literacy & Code Management
                                   |
      Teaching Paradigm            |
                ▼                  |
          Kroker's new.REAL        |
                  ├─ Lacanian Real ——————————————> Challenging Perception of Reality
                  ├─ Foucault's Active Knowledge ——> Active Participation
                  └─ Baudrillard's Simulacrum ——————> Tangible Education Beyond Symbolism
                                   |
      Technological Integration    |
                ▼                  |
          GPT API Utility          |
                  ├─ Audio-Text Synthesis ——————————> Multi-modal Learning
                  ├─ Disparity Analysis ——————————> Critical Evaluation
                  └─ AI-agent Assistance ——————————> Advanced Queries & Deep Dives
                                   |
      Learning Outcomes            |
                ▼                  |
          Preparedness for new.REAL ——————————————> Tactical Skill Acquisition
                  ├─ Abstraction & Mechanics Analysis ——> Depth of Understanding
                  └─ Immediate Skill Demonstration ——————> Real-world Application
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1. Festooning bees from Wildflower Meadows. Retrieved from: www.wildflowermeadows.com