CLARK UNIVERSITY

CHALLENGE CONVENTION.
CHANGE OUR WORLD.

Brian Hogan, MS <email><in><github><this.pdf>
Instuctor of Computer Science
School of Professional Studies
Clark University
950 Main Street, Worcester, MA, 01610, 508-793-7218

Hello! My efforts are dedicated to equipping students with skills in structural acumen, strategic thinking, and expert coding for information synthesis.

Currently, 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 has enhanced my ability to develop graduate courses, such as COSC-526 Data Mining with Spark at the University of Tennessee.

An active learning pedagogy complements my instruction through the utilization of Colab, Google Sheets, and Github. Drawing inspiration from bee festooning, students engage in weekly JAMs, where they connect fundamental concepts, such as swiftly converting a physical book into Python data objects. Additionally, in alignment with my contributions to the Get Started with Python module within Google's Advanced Data Analytics certificate program, I furnish codebooks to facilitate statistical analysis, text mining, and machine learning. 

Technology has long intersected with a Lacanian, but cloud compute and seamless computing offer a new space for students to experience classroom cybernetics. Computer science education is no longer passively consumed but a lived and crafted performative exhcnage. Algorithms and computational processes are bluring spacetime perception [1] and I draw on Arthur Kroker's concept of *body drif* [2], or blending tech with human body, and a new.REAL [3] to elminate soft(ware) barriers and experience algorihmic processing as a new.REAL. Students don't absorb, but rather immerse themselves in task challenges. Unconstraining compute hardware has shrunk cognitive overload from how.Tos providing increased attention and thought toward abstracting information science abstraction and learning the ontological skills to activitly shape information into an actionable commodity. Generative pretrained transformers (GPT) ontological precepts, experience, and engagement by

a) Converting lecture audio to text and integrating it into the class corpus.
b) Employing GPT tech to synthesize disparities, including lecture notes and textbooks.
c) Emailing the disparity index and aggregating media into a central repository.
d) Feeding the repository into a course-specific AI agent, further supporting student tasks.
e) Facilitating upskilling and recall mnemonics while immersing students in the tech/social fabric of a new.REAL

code
university.instructor

portfolio.home
industrial.reengineering

recommendations
research.experience

science.edit.+.tech.write
tutor.an.volunteer

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

- cv .pdf
- evaluations .pdf
- diversity.statement .pdf
- research.interests .pdf
- scholarly.activities .pdf
- teaching.statement .pdf
- 7.pillars.of.skills .pdf

lecture.thematic

Melitologic and arachnids, mainly 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

- A worker bee signals a sentry to clean a mite instead of infecting the hive indicating health consciousness, unity, and collective intelligence.
- 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

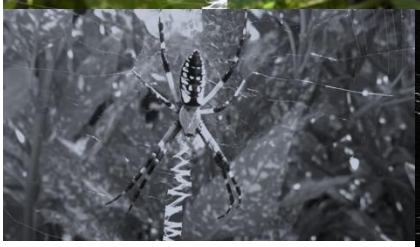
Robledo-Ospina, Luis, et al. Visual Antipredator Effects of Web Flexing in an Orb Web Spider, with Special Reference to Web Decorations. *Die Naturwissenschaften* 110.3 (2023): 23. *ProQuest*. Web. 18 Aug. 2023.

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.

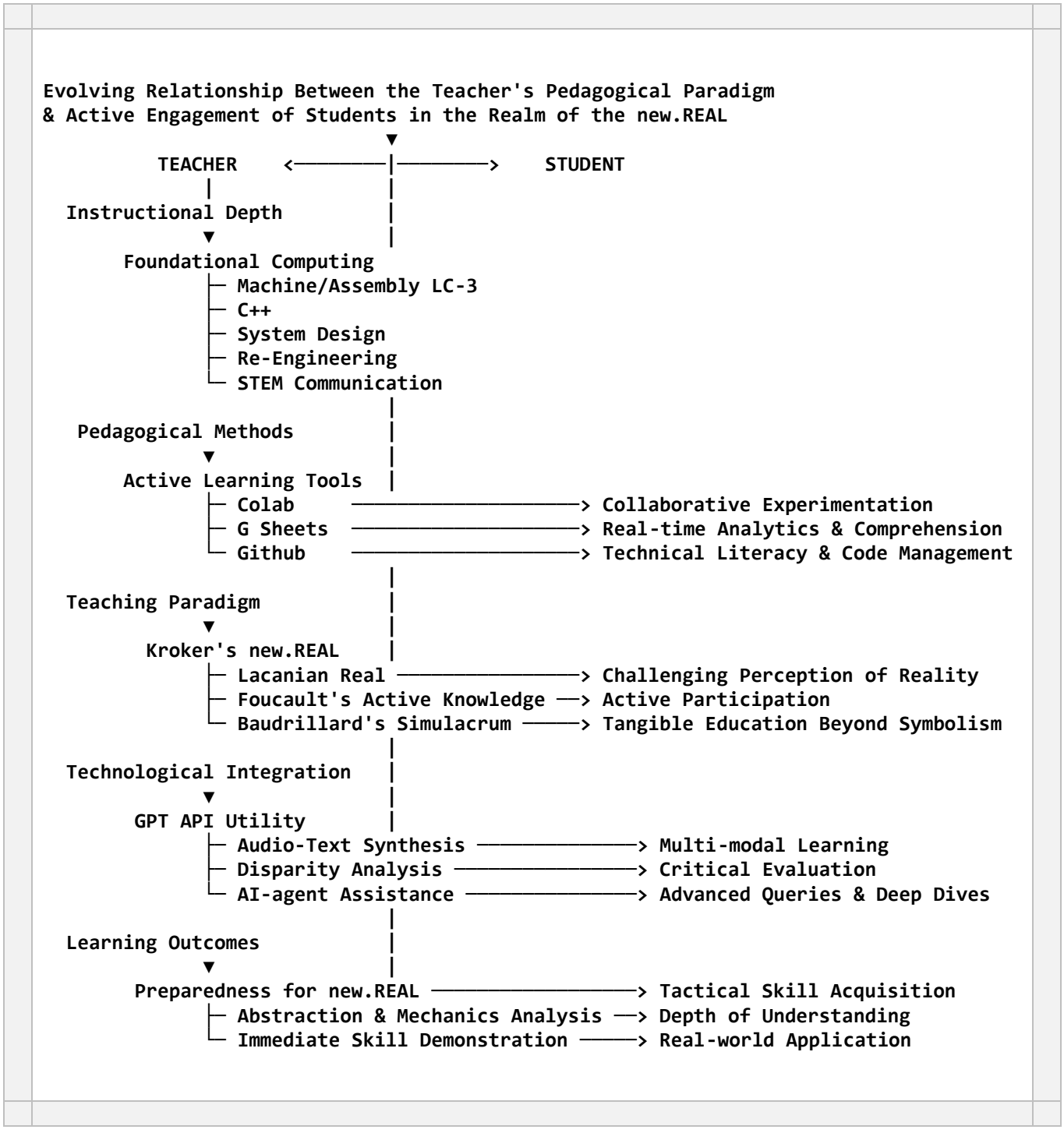
Baltimoreandohiorr(2019),
https://www.youtube.com/watch?v=kNzg0PCVMqk



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

GPT.generated.schematic

- GPT performs remarkably well with ASCII information exchange diagrams.



1. Festooning bees from Wildflower Meadows. Retrieved from: www.wildflowermeadows.com