Teaching Statement
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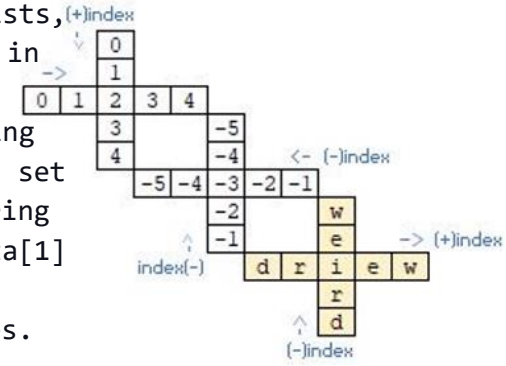
<grandfather's micrometer>

Precision and attention to detail
Inspired by American industrialism from the 1890s to 1920s, I foster attention to detail and precision in computer science students by commenting on code, skilling in data structures, and demystifying the Python Package Index libraries (pypi). Interactive spreadsheet workspaces (sheets) build a corpus of student activities and reflections, accommodating the filtering of learning objectives and comments across code and items to reinforce learning. The corpus equates to a part kart of machined outcomes; supervisor's mike up, or micrometer measure, inspecting for precision and generating feedback to refine quality. Such work and education consistent and persistent cheatsheets help further one towards accuracy.

Skilling in the core Python built-in data structures, i.e., lists, strings, tuples, and dictionary (aka built-in), forms a backbone in data exchange, transformation, and interoperability. Students become a programmer when intuiting built-in objects by iterating or referencing data to suit a snapshot. Similar to mastering a set of wiggly data blocks where attention to detail grows by ensuring proper cases and no blank spaces. This work trains in tidy data[1] arrangements reflecting the grok required to index, sort, and transfer data to suit statistic and machine learning objectives.



Demystifying the Python Package Index connects students to the 600,000+ users who design and skill amazingness. Instead of re-inventing a transformation, teach students to learn the right words to query pypi to source suitable objects and methods. Why weed through poor search outcomes fattening Google's pocket? While working at Google, my manager tasked me to create effective search trees to provide career certificate learners with efficient search parameters. Such explicit search language empowers student attention by restoring focus to task completion. "Yes!" more upfront attention to language detail is required, but it saves time with precise outcomes. Some students embrace the approach as an inventory of quality searches that may open an invitation to foobar challenge.

Festooning students
Underlying precision and attention to detail are the principles of information democracy and information transparency. By students copying assignment completion text into a shared workspace, an array of styles and problem-solving approaches emerges, enabling those behind to seek help directly or indirectly. Such hive learning structures provide the apparatus to facilitate festooning, i.e., organic scaffolding, across students to solve, repair, and persist instead of flying solo. Furthermore it helps hold one accountable by performing their work.

Festooning Bees [1]

The formed corpus is transcribable into a data pipeline opening the art of the possible pathways, for instance, applying ChatGPT to consolidate and summarize student outcomes. ChatGPT is ladened with controversy but well suited for harvesting a classroom's information honey. Consolidated approaches and variants provide a walk away referencable nexus of know-how.

Scientific literature continues to assess classroom AI with ontologies like adaptive student achievement[2] or performance prediction[3]. My courses at ICARUS-AI apply tasks by AI scored skill levels. I work to connect these principals ensuring active learning and collaborative JAMs to build and solve. Real time collaboration in Jupyter Notebooks is almost bug free and will make a marvelous addition to such learning experiences.

DEI

Diversity, equity, and inclusion embody the hive mind. Cloud workspaces, GitHub, and Microsoft teams (teams) facilitate swarming to address unfinished activities. Hyperlinks provide “at the moment” connections to everything a student needs to focus on. I take workstation equity very seriously, as improper setups and not owning a mouse impact situational learning. I’ve obtained local e-trash center permission to help provide each student with a 2nd and even 3rd monitor et al., to direct attention to active moments. I love that this environment leaves no accessibility students behind and strengthens their scaffolding. For instance, one student with different inner-city experiences wasn't inclined to speak but behaved very differently with JAM sessions. I asked a peer to explain their solving approach leading to an ongoing flow. Whether their buzzing doesn't matter, their now actively solving.