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Instructor of Computer Science
└> builder of generative AI teaching assistants
School of Science and Technology

-> Teaching Statement <-

I. Skills for work sustainability

My pedagogical approach is anchored in mnemonics and interactive JAMs, fostering active student collaboration using Colab, Google Sheets, and GitHub. The > 7.pillars.of.python initiative equips students with essential programming tools and data transformation skills that prepare them for immediate real-world application, fostering a dynamic learning environment where theory and practice converge seamlessly. The framework encourages students to employ information science ontology principles to process, interpret, and reshape information. Mirroring bees' collaborative festooning, students synergistically weave data and insights, leveraging ontology principles to enhance their intuition.

By emphasizing cognitive flexibility, classroom techniques teach students to adapt and extend their learning with pypi.org libraries, preparing them for rapid changes in the tech landscape and enabling them to effectively utilize intelligently designed objects already in use. For example, one student loved ski jumping and utilized a ski-jumping library found during class to create an outcome versus a class assignment. Such approaches help to understand students' interests while encouraging them to adopt information science principles and solve better.

Background expertise includes industrial re-engineering across manufacturing, defense, and pharmaceutical industries, providing a deep and wide experience portfolio to draw upon when answering students and providing tactical and strategic perspectives. Skills include system design, Python and R programming, machine learning, statistics, and systems thinking, and a personal favorite: STEM communication. Moreover, Syracuse University data science professors focused on quality theoretical knowledge and advanced coding, which led to the delivery of high-quality adaptive, interactive AI teaching assistants that students use to improve their learning while managing their cognitive load.

II. Why is it necessary to skill for work sustainability?

Today's Lacanian REAL is skill replacement by large language models (LLMs) and generative pretrained transformers, realizing Frey and Osborne's 47% of US employment is susceptible to automation (2017). However, Eloundou et al. (2023) found that 80% of the US workforce have at least 10% of their work tasks affected by LLMs, and 19% of all jobs face 50% skill replacement exposure (p.1,3). Manning et al. (2022) noted ChatGPT's 2022 code generation out-of-the-box correctness was 28.8% at its first release, prompting me to adapt and develop new pillars of work sustainability. I focus on helping skill-struggling coders and neurodiverse learners with accessible tools and AI agents in hopes of adopting upskilling to counter obsolescence. Additional efforts help students with internships and find suitable employment.

II. Certification Skilling vs. Higher Education

Higher education is expensive and often lacks practical training, while companies increasingly shift toward skill-based hiring and recognize certifications as valid degree alternatives. Major tech firms offer free, ****ultra-high-quality**** training programs, like AWS Academy or Google Cloud Certification, enabling first-year students to earn $200,000+ in two years without a degree. As experienced with more than a handful of students, it is very concerning that psychology graduates and other fields can invest over $220,000 without exposure to machine learning algorithms. I'm dedicated to helping universities modernize coursework by incorporating the latest scientific evidence and methods, ensuring faculty and students are well-prepared to navigate the complexities of AI and skill for Kurzweil's singularity.

Thank you, and read this research statement for more details on teaching assistants.
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