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Rapid City, SD 57701

Feburary 21st, 2021

Dear Professor Jeffrey S. McGough,

Re: Teaching Faculty (ID:1012719)

Thank you for considering my application for the Computer Science Department’s Teaching Faculty position at the University of Illinois Urbana-Champaign. As a skilled technical curriculum developer and instructional designer, I specialize in delivering dynamic, active learning experiences to help students achieve goals by forming a sustainable foundation for decoding complexity. Current coursework includes system design, STEM technical writing, and Python programming with data structures. I love statistics happy to deliver its material and certainly any machine learning skilling your program offers. Thank you for assessing my fit and known I would also really love to experience your neighborhood.

**Professional experience**

My practitioner work in industrial re-engineering used discrete-event simulation, data science, and statistics to optimize production environments and provide strategic resource plans for C-suite executives. This work built a knack for solving odds with programming and statistics. Student value the fieldwork stories and certainly laugh like I do from some of its claptrap. Last year I wrote a Python essentials course for a big.TECH giant and its instructional designers let me design two of four-course total course capstone projects. Since then I designed a unique Python data objects and coding skills course to help skill with data transformation objects and casting. Who knew old **C** could help teach old and young dogs new tricks?

**Teaching skills and goals**

My teaching pillars are applying learning theory, performing instructional design, writing accessible technical content, and delivering active in-person instruction. Deepening a students’ interest using interactive learning experiences is very rewarding and maintains student’s interest. I focus on bonding students to their code and providing structures forming peer relationships using collaboration and active learning. Such experiences builds appreciation for joining communities like the Python Package [Index](https://pypi.org/) cohort whose code flew NASA’s [Ingenuity](https://github.com/readme/featured/nasa-ingenuity-helicopter) helicopter on Mars.

Teaching kernels from evidence-based research informs how artificial intelligence (AI) changes the classroom with automated grading, learner need detection, and who needs personalized assistance. I continuously read between the lines and expand computer science literacy with Lex Fridman podcasts, Reddit, and Notebooks forums. I’ve API access to OpenAIs GPT-3 and submitted a proposal for ChatGPT academic access to test grading of coding assignments. There’s a talent shortage, and companies are opening seats to career certificate holders. I aim to equip university students with the necessary adaptability and grit to elongate their careers.

**Teaching strategies**

I innovate. My professional practice demanded it as active learning necessitates it. For instance, the computer science technical writing class submits work into a cloud spreadsheet corpus similar to bees festooning a repair they construct a polysyllabic word tree from diverse readings. I colloquially refer to their work as “hive learning” and find most students enjoy the organic analogies for buzzing work. What’s most important is cross-pollination activities help accessibility students build proficiency in an inclusive manner without specifiying their needs.

I advocate. Mixing AI and code into class builds familiarity with the nusances and gut feels for if code looks right. Layering AI principals into lectures alters frames of thinking such as the value of a corpus for faciliating text mining. When appropriate, students experience algorithms such as Latent Dirichlet Allocation to appreciate ontology formation, clustering, and sentiment scoring. Research indicates the ubiquity of data-driven AI, and by helping students envision new data pipeline sources leads to ideation of ideas and innovation driving data decision-making.

**Research interests**

My interest is in developing originality discourse scoring instrument, and I would also like a utility to help ameliorate poor information exchange quality. Skillful verbiage is associated with technical know-how and may help generate a welcoming atmosphere in one’s work environment. Appropriately used language can further one’s success, and there are other advantages of using polysyllabicisms to facilitate information exchange quality. I envision a training library to assist computer scientists in expanding their vocabulary.

**Future asirations**

I admire and value academic research and its ongoing contributions to scientific knowledge. I’m fortunate for my exposure to social research and multivariant statistics, but a growing family led to practitioner work. While growing with the department, if its horizon needs research instructors, I’d perform the skilling to substantiate its instruction.

**Suitability**

New partnerships allow one to formulate relationships that navigate challenges and reach new milestones. I embrace my leaders and skilled colleagues by learning from their experiences and offering my spirit of positivity. I conduct my affairs irenically and strive to heighten my environment's consciousness.

My interest in teaching at the South Dakota School of Mines is firmly seated in a commitment to quality education and a desire to hasten skill development and grow a student's sense of self. I remain grateful to Professors Cheek, Lesko, and Phofl, who extended a personal interest in my schooling, and I plan to share similar kindness with students in the university's care.

Thank you for taking additional time to assess my curriculum vitae and teaching philosophy. Please extend my gratitude to the hiring committee's assessment of character and other indications to provide long-term service to South Data school of mines.

Sincerely,



Brian Hogan