Teaching an Old Dad New Tricks

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Introduction

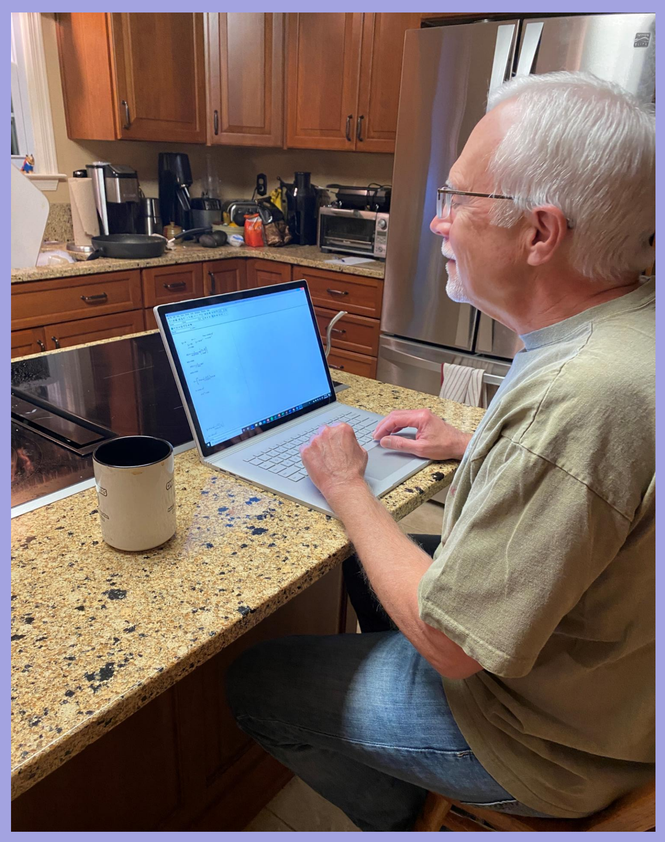
For my practicum, I was originally enrolled in CPSS 240. However, the service-learning project got cut short, so I had to be innovative and do a service-learning project from home. I decided to teach my father how to use a computer program called MathCad.

Activities:

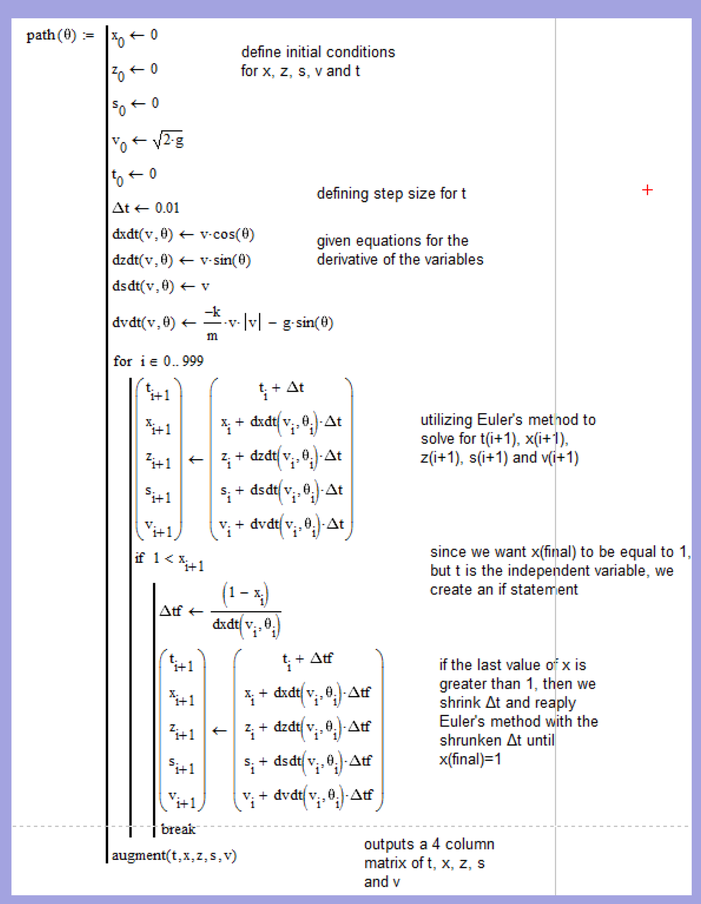
- Each week, I taught my father a different skill on MathCad and gave him practice problems in order for him to master the skill
- Some of the skills I taught him were integration, minimization, graphing, linear regression, and solving a system of equations

Impact:

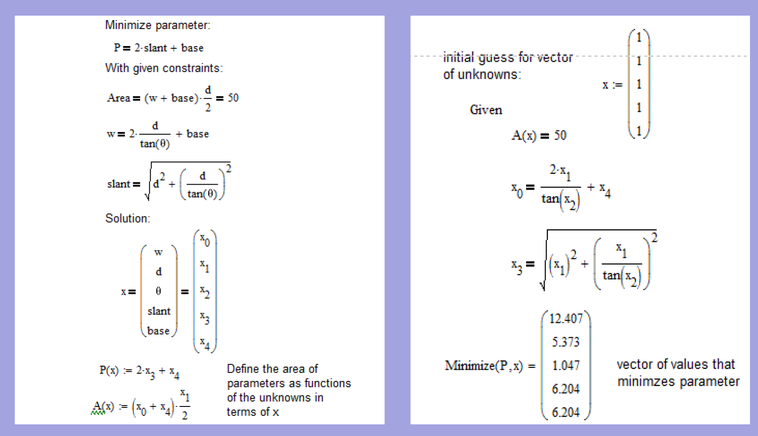
Familiarizing him with MathCad allows him to work more effectively with his peers, and allows him to accomplish tasks in a more efficient way.



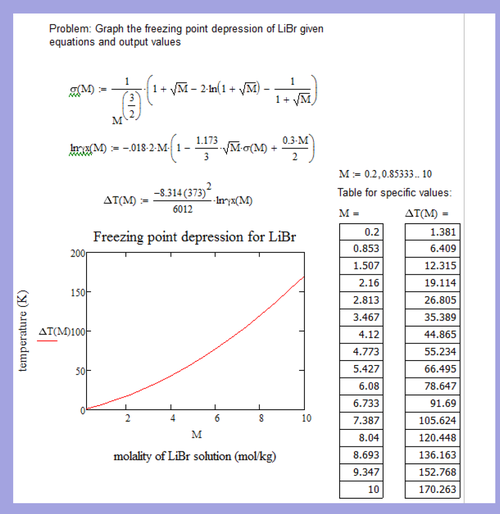
My father trying to figure out how to solve a problem on MathCad



Example of a function created that governs how a cart rolls down a hill in regards to time, position, and velocity



(above) Example of a minimization engineering design problem and solution on MathCad



M =	ΔT(M) =
0.2	1.381
0.853	6.409
1.507	12.315
2.16	19.114
2.813	26.805
3.467	35.389
4.12	44.865
4.773	55.234
5.427	66.495
6.08	78.647
6.733	91.69
7.387	105.624
8.04	120.448
8.693	136.163
9.347	152.768
10	170.263

An example of using functions to plot data and display specific values

Site Information:

Name of Site: Rachel's home

The site mission: Improve my father's computer skills

Contact information: Rkula@terpmail.umd.edu (for all inquiries to teach my father more computer skills)

Issues Confronting Site:

My father is a civil engineer and works with many younger engineers who use newer programs such as MathCad that he is not familiar with. This prevents him from being able to easily understand some of the work done by his peers.

Future Work:

The general computer and programming skills my father has learned using the MathCad program may also enable him to more effectively use other computer programs to solve engineering-related problems

Acknowledgments:

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