Machine Learning Engineering Bootcamp

Capstone: Survey Existing Research and Reproduce Available Solutions

Step 6

Learning Objective

- Identify research papers dealing with the same or similar problem as your Capstone project
- Find potential public solutions/code linked to the research found on the topic
- Attempt to reproduce some of the solutions/approaches if code is public
- Present results on what you learned and how your approach might be better or improve on the current work others have done around the same topic/purpose

Criteria	Meets Expectations
Time Estimates	5 - 20 Hours
Completion	❏ Documented summary of the research papers/articles and link them to your capstone project ❏ Documented available code examples/notebooks of solutions publicly available ❏ Shared copy of executed notebook(s) you managed to reproduce ❏ Shared conclusion/analysis on what you learned through this exercise and how your Capstone might improve on what others have already done on the topic ❏ Demonstrated to mentor the results you were able to reproduce ❏ Analysis, Code & Results are uploaded to Github (where applicable).
Process and understanding	❏ The submission shows that the student was able to find through

	research, what others have built on the same topic, the challenges they faced, how they attempted to solve them, and internalized their conclusions. ❏ The submission sets a baseline for the student in terms of accuracy/performance of their ML model ❏ The submission demonstrates that the student understands at a high level the various approaches taken and is able to differentiate the strength and weaknesses of each solution
Presentation	❏ Google Slides/Doc detailing the research found on the topic and the various repos/code shared, as well as links to each dataset used for each project. ❏ Well-documented GitHub repository and code ran by the student for each of the solutions surveyed.

Excellence:

1. *The student applied and compared multiple research papers and was able to reproduce all their results..*
2. *The student studied, learned the cutting-edge techniques that were detailed in the various papers, and proposed to implement some enhancements in their capstone to attempt to get close to or exceed SOTA results.*

For reference, review how this interim step fits into the overall Capstone Project Rubric.