



## Data Boot Camp Grading Rubric

# Project #4: Machine Learning Integration

### Instructions:

Evaluate the student's submitted Final Project assignment and presentation against the outlined criteria in the rubric below and assign a rating to each criterion. Add points earned across all criteria and convert the total points to a letter grade using the *Recommended Final Project Scoring Breakdown*.

### Note:

We encourage students to collaborate and share ideas during the project weeks. Therefore, you may notice shared code, documentation, and/or write-up explanations across student submissions. This is acceptable and should be a consideration when assigning a rating to the student's performance.

### Recommended Final Project Scoring Breakdown

Total Rubric Points Achieved	Project Grade
90 or more	A
80–89	B
70–79	C
60–69	D
59 or less	F

### Rubric for Skill Drills:

	Proficiency 20 points	Approaching Proficiency 17 points	Developing Proficiency 14 points	Emerging 12 points	Incomplete
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<b>Data Model Implementation</b>	<p>Student produces an analytical model in Python that fulfills all the following specifications:</p> <ul style="list-style-type: none"> <li>✓ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning</li> <li>✓ Script cleans, normalizes, and standardizes input data prior to modeling</li> <li>✓ Model utilizes data retrieved from a relational database or big data source (SQL or Spark)</li> <li>✓ Model demonstrates meaningful predictive power (&gt;75% classification accuracy, &gt;80 R-squared)</li> </ul>	<p>Student produces an analytical model in Python that fulfills all the following specifications:</p> <ul style="list-style-type: none"> <li>✓ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning</li> <li>✓ Script cleans, normalizes, and standardizes input data prior to modeling</li> <li>✓ Model utilizes data retrieved from a relational database or big data source (SQL or Spark)</li> </ul>	<p>Student produces an analytical model in Python that fulfills all the following specifications:</p> <ul style="list-style-type: none"> <li>✓ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning</li> <li>✓ Script cleans, normalizes, and standardizes input data prior to modeling</li> </ul>	<p>Student produces an analytical model in Python that fulfills all the following specifications:</p> <ul style="list-style-type: none"> <li>✓ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning</li> <li>-OR-</li> <li>✓ Script cleans, normalizes, and standardizes input data prior to modeling</li> </ul>	<p>No submission was received</p> <p>-OR-</p> <p>Submission was empty or blank</p> <p>-OR-</p> <p>Submission contains evidence of academic dishonesty</p>
<b>Data Model Optimization</b>	<ul style="list-style-type: none"> <li>✓ Clear, well-documented evidence of model optimization and performance evaluation in the form of one of the following: <ul style="list-style-type: none"> <li>✓ A CSV/Excel table showing model designs, testing parameters, and model performance</li> <li>✓ A Python script that utilizes hyperparameter tuning logic</li> </ul> </li> <li>-AND-</li> <li>✓ Overall model performance is printed or displayed at the end of the script</li> </ul>	<ul style="list-style-type: none"> <li>✓ Some evidence of model optimization and performance testing within Python scripts</li> <li>-AND-</li> <li>✓ Overall model performance is printed or displayed at the end of the script</li> </ul>	<ul style="list-style-type: none"> <li>✓ Overall model performance is printed or displayed at the end of the script</li> </ul>	<ul style="list-style-type: none"> <li>✓ Performance of the model is unknown/unclear</li> </ul>	
<b>Project and</b>	<ul style="list-style-type: none"> <li>✓ Successfully uploaded to</li> </ul>	<ul style="list-style-type: none"> <li>✓ Successfully uploaded to GitHub;</li> </ul>	<ul style="list-style-type: none"> <li>✓ Successfully uploaded to GitHub;</li> </ul>	<ul style="list-style-type: none"> <li>✓ Unsuccessful uploads to GitHub</li> </ul>	



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<b>Documentation Uploaded to GitHub</b>	<p>GitHub; demonstrating professional quality of presentation</p> <p>✓ GitHub repository is free of unnecessary files and folders and has an appropriate .gitignore in use</p> <p>✓ The README is customized to a professional level</p>	<p>demonstrating professional quality of presentation</p> <p>✓ GitHub repository has minimal unnecessary files and folders (no more than two) and has an appropriate .gitignore in use</p> <p>✓ The README is customized to a basic level</p>	<p>demonstrating professional quality of presentation</p> <p>✓ GitHub repository has minimal unnecessary files and folders (no more than three)</p> <p>-OR-</p> <p>✓ Does not use a .gitignore text file</p> <p>✓ The README is minimally customized</p>	<p>✓ Does not use a .gitignore text file</p> <p>✓ The README has no customization</p>	
<b>Group Presentation</b>	<p>✓ All group members spoke during presentation</p> <p>✓ Group was well prepared</p> <p>✓ Presentation was relevant to material</p> <p>✓ Presentation maintains audience interest</p>	<p>✓ All group members spoke but didn't split time equally</p> <p>✓ Group was mostly prepared, with minor hiccups</p> <p>✓ Presentation was almost entirely relevant</p>	<p>✓ Some group members barely spoke, others spoke for much longer</p> <p>✓ Group was fairly well prepared but encountered some major hiccups</p> <p>✓ Presentation was mostly relevant</p>	<p>✓ Not all group members spoke during presentation</p> <p>✓ Group seemed unprepared, presentation was scattered or confusing</p> <p>✓ Presentation was not relevant to material</p>	
<b>Slide Deck</b>	<p>✓ Slides are visually clean and professional</p> <p>✓ Slides are relevant to material</p> <p>✓ Slides effectively demonstrate project</p> <p>✓ Slides are clear and maintain audience interest</p>	<p>✓ Slides are visually clean and professional but contain minor areas for improvement</p> <p>✓ Slides are almost entirely relevant to material</p> <p>✓ Slides are mostly effective at demonstrating project</p>	<p>✓ Slides are visually clean and professional but contain areas for improvement</p> <p>✓ Slides are somewhat relevant to material</p> <p>✓ Slides are somewhat effective at demonstrating project</p>	<p>✓ Slides are not visually clean and professional and contain substantial areas for improvement</p> <p>✓ Slides are not relevant to material</p> <p>✓ Slides do not effectively demonstrate project</p>	