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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Data Model Implementation	Student produces an analytical model in Python that fulfills all the following specifications: √ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning √ Script cleans, normalizes, and standardizes input data prior to modeling √ Model utilizes data retrieved from a relational database or big data source (SQL or Spark) √ Model demonstrates meaningful predictive power (>75% classification accuracy, >80 R-squared)	Student produces an analytical model in Python that fulfills all the following specifications: √ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning √ Script cleans, normalizes, and standardizes input data prior to modeling √ Model utilizes data retrieved from a relational database or big data source (SQL or Spark)	Student produces an analytical model in Python that fulfills all the following specifications: √ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning √ Script cleans, normalizes, and standardizes input data prior to modeling	Student produces an analytical model in Python that fulfills the following specifications: √ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning -OR- √ Script cleans, normalizes, and standardizes input data prior to modeling	No submission was received -OR- Submission was empty or blank -OR- Submission contains evidence of academic dishonesty
Data Model Optimization	√ Clear, well-documented evidence of model optimization and performance evaluation in the form of one of the following: √ A CSV/Excel table showing model designs, testing parameters, and model performance √ A Python script that utilizes hyperparameter tuning logic -AND- √ Overall model performance is printed or displayed at the end of the script	√ Some evidence of model optimization and performance testing within Python scripts -AND- √ Overall model performance is printed or displayed at the end of the script	√ Overall model performance is printed or displayed at the end of the script	√ Performance of the model is unknown/unclear	
Project and	√ Successfully uploaded to	√ Successfully uploaded to GitHub;	√ Successfully uploaded to GitHub;	√ Unsuccessful uploads to GitHub	

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

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