**Final Exam Content**

**Capstone Project**

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| **№** | **Question Direction** | **References** |
| 1 | SRS, Stratification, Clustering, Stratification with Clustering | [1] |
| 2 | Linear Regression (with different hypothesis formulas\*), Normal Equation | [2] |
| 3 | Logistic Regression (with different\* treshold values), OR\* Regularization | [3], Github code from Andrew Ng |
| 4 | Neural Network (Different Architecture, evaluation metrics) | [4], Github code from Andrew Ng |
| 5 | Logistic regression\*, Neural Network\* accuracy metrics (F-1 score) | [5] |
| 6 | Software Documentation | [6] |
| 7 | Analyze categorical variables of survey | [7] |
| 8 | Software Implementation (Naming conventions (pascal, hungarian)) | [8] |
| 9 | Testing of Software (Unit Testing, Regression Testing) | [9] |
| 10 | Identification of Bag Type from some piece of codes on different programming language (python, c++, java, javascript, go and etc.)  OR\*  Identification of Correct Diagram Type for some specific software project  OR\*  Identification of Good and Bad Case of GUI Mockups for some specific software project. | [10] |

\*it depends on variant type.

**References:**

[1] Look at 2nd, 4th and 6th question from Quiz1

[2] Loot at 4th, 5th from Midterm

[3] Look at the questions from Assignment2

[4] Look at 5th, 6th and 7th questions from Quiz2

[5] Look at 1st from Quiz2

[6] Look at 10th from Quiz2

[7] Look at 1st question from Midterm

[8] Look at 2nd question AND 4th question from Endterm

[9] Look at 1st question AND 7th question from Endterm

[10] Look at 3rd question from Endterm OR 5th and 8th question from Endterm OR Look at 6th question from Endterm

Time duration – 1 h 50 minutes.

Allowed Tools:

* Python (google collab, jupyter, PyCharm)
* Excel
* Calculators
* Paper, pencil, pen.
* Prepared code (customized version of Andrew Ng, and etc.)
* Written materials (copybooks) -> formulas,

Not allowed tools:

* Social Networks
* Any types of AI Tools (such as Chat GPT, deepseek and etc.)
* Books (attached in Moodle) and any other book during final exam