Rubrics for the Supervisor's Written Part and for the External Reader

Executive Summary or Abstract: Initial explanation of how the student resumes his area of interest within the discipline, establishes the objectives of his thesis or capstone, and creates expectation to the reader. (15%)

- Insufficient (0 - 4.9): provides a vague description of the relationship between the study and areas of interest within the discipline. It is not clear the goals to achieve in the thesis or capstone. The executive summary or abstract is not clear and it doesn't generate any expectations. The objectives are not original and concerning with any trend or relevant context.

- Sufficient (5 - 6.9): provides some description of the relationship between the study at hand and areas of interest within the discipline. The objectives of the thesis or capstone are understandable but not clear enough. There is some expectation to see how to solve it but the problem is not original or innovative.

- Good (7 - 8.9): provides a clear description of the relationship between the study at hand and areas of interest within the discipline. The objectives are clear, generate expectation, and treat original topics to be treated. The initial approach is innovative.

- Excellent (9 - 10): explains the relationship between the study at hand and areas of interest within the discipline in an insightful and thorough manner. Demonstrates initial critical thinking, the objectives of the thesis or project are innovative and generate high expectations.

Prior Art and Methodology: Whether the student collects and uses secondary sources, empirical material, and/or data, to justify their research or analysis questions and fulfill project objectives, effectively implementing the chosen methodology. (15%)

- Insufficient (0 - 4.9): fails to clarify what material/data is used or how it is used; or uses inappropriate material/data; or exhibits inappropriate use of material/data. Insufficient literature review. Either fails to implement the chosen methodology or does so ineffectively.

- Sufficient (5 - 6.9): identifies appropriate material/data and explains how it is used. Implements the chosen methodology with limited effectiveness. The literature review covers a decent part of the relevant prior art, but could be deeper..

- Good (7 - 8.9): clearly identifies appropriate material/data and explains how it is used; Uses material/data in a way that is consistent with the logic of the inquiry and its purpose.

Implements the chosen methodology effectively. The literature review is sufficiently comprehensive.

- Excellent (9 - 10): in addition to the description for "Good": Identifies problematic issues and limits to the use of the material/data extraordinarily well; the literature review is both exhaustive and insightful.

Technical Content: does the thesis include a reasonable amount of sound technical work? Examples include: a library, a predictive model, an ML agent, a quantitative analysis with data visualization, a web application, etc. No-code solutions don't count (if all solutions in the thesis are no-code, the student will receive a 0 in this epigraph). (15%)

- *Insufficient (0 – 4.9): Software, models, or analysis are poorly implemented, contain major flaws that undermine credibility, or are outright missing. Results are unreliable, inaccurate, or inconsistent. Fundamental errors in logic, methodology, or computation are evident. No meaningful validation, testing, or evaluation is performed.*

- *Sufficient (5 – 6.9): Software, models, or analysis are basically functional but lack robustness, efficiency, or rigor. Some results are correct but inconsistencies or limitations are present. Validation, testing, or evaluation is attempted but incomplete or superficial. Technical weaknesses limit confidence in the findings.*

- *Good (7 – 8.9): Software, models, or analysis are technically sound and mostly reliable. Minor flaws may exist but do not significantly undermine results. Methods are appropriate, and results are generally valid. Validation and testing are present and reasonably thorough, though not exhaustive. Demonstrates good technical competence.*

- *Excellent (9 – 10): the software, models, or analysis meet high technical standards and are implemented with rigor and precision. Results are accurate, consistent, and reproducible. Methods are well-justified and appropriate. Validation and testing are comprehensive and convincing. Demonstrates excellent technical quality and professional-level competence.*

Academic and Professional Style: Academic and professional style, language use, coherence, and readability. Citations and Bibliography. (10%)

- Insufficient (0 - 4.9): uses non-academic style. Inaccurate language use interferes with reading and comprehension. APA citation format not observed consistently. Bibliography is missing or incorrectly formatted.

- Sufficient (5 - 6.9): uses language sufficiently accurately and appropriately for comprehension, but use of illustrations and examples is infrequent and/or not fully competent. Some cited works are correctly formatted, but inconsistencies are evident in the citations. Bibliography is inconsistently formatted.

- Good (7 - 8.9): uses appropriate academic language well; minor errors may exist but do not interfere with fluent reading and comprehension; illustrations and examples contribute

to the clarity of the arguments; citation format almost always observed. Bibliography is correctly formatted with few errors.

- Excellent (9 - 10): produces a document that meets academic writing standards; readily conveys meaning; illustrations and examples enhance the clarity of the arguments; citation format consistently observed. Bibliography is correctly formatted and has no errors.

Student Individual Contribution: Originality, effectiveness, or added value of the project's analysis, student contribution, or proposed solution. (15%)

- Insufficient (0 - 4.9): the project's analysis, contribution, or proposed solution lack originality or effectiveness, providing no added value to existing approaches to the topic. The student developed an overview of the domain studied or a general analysis of industry.

- Sufficient (5 - 6.9): the project's analysis, contribution, or proposed solution have only limited originality or effectiveness, adding limited value to existing approaches to the topic. Students developed a deep analysis of the domain or industry without significant contribution of their own.

- Good (7 - 8.9): the project's analysis, contribution, or proposed solution are fairly original and effective, providing value to existing approaches to the topic. The student proposed a solution or a new theoretical approach to a problem studied.

- Excellent (9 - 10): the project's analysis, contribution, or proposed solution are exceptionally original and effective, adding significant value to existing approaches to the topic. The originality and own contribution of the student are clear or even brilliant.

Consistency and Coherence (15%)

- Insufficient (0 - 4.9): the text is fragmented and unbalanced; internal links among theory, methods and results are not explicit; problems with headings and paragraph and section structure. Assessments and conclusions are not supported by data or secondary sources. Overall, the project lacks coherence or readability.

- Sufficient (5 - 6.9): the text is not fully balanced; some key internal links are missing; does not fully form a coherent whole; some problems with headings and paragraph and section structure. Assessments or conclusions seems to be supported but data or secondary sources have not been shown.Overall, the project is at times incoherent or low on readability.

- Good (7 - 8.9): it forms a rather balanced and coherent whole; some internal linkages are implicit rather than explicit; headings and paragraph and section structure typically support the overall coherence. Assessments or conclusions have been supported by data or secondary sources. Overall, the project is mostly coherent and readable.

- Excellent (9 - 10): it forms a coherent whole with consistent and explicit internal linkages; has a logical flow of argumentation with neat headings and clearly structured paragraphs and sections. Assessments or conclusions have been supported by data or secondary sources with original perspectives. Overall, the project is high on coherence and readability.

Application to the Real World and Credibility: Can the conclusions of thesis or capstone be applied to real-world, or have they been already considered in a real context? (15%)

- Insufficient (0 - 4.9): the conclusions are not applicable to the real world, they are vague and they are not credible. Hypotheses and conclusions are not credible and there is not any relationship with the development of the project or its objectives. There are many "no-brainer" assessments.

- Sufficient (5 - 6.9): the conclusions shown might be applicable to the real-world. Conclusions show uncertainty about its applications to the real-world. Hypotheses and conclusions are credible but not really supported to be applied. There are some "no-brainer" assessments.

- Good (7 - 8.9): the conclusions are rather applicable to the real world. Conclusions show a good understanding of the real-world and its applications. Hypotheses and conclusions are credible and adequately supported.

- Excellent (9 - 10): the conclusions show innovative applications to the real-world. Have considered current trends and may point out new ways to analyze the real-world. Conclusions show excellent understanding of the real-world and its applications.

Rubrics for the Panelists

Organization and Structure (20%)

- Insufficient (0 - 4.9): inappropriate and/or disorganized structure. Information is not presented in a logical sequence. Objectives unclear.

- Sufficient (5 - 6.9): structure not entirely clear or somewhat inappropriate. Information is presented in a somewhat illogical sequence; Objectives not entirely clear.

- Good (7 - 8.9): appropriate and organized structure; Information is presented in a logical sequence; Clear objectives.

- Excellent (9 - 10): organization and structure of the presentation are not just clear but also elegant, enhancing the overall project. Information is presented in a logical sequence. Objectives are exceptionally clear.

Motivation (20%)

- Insufficient (0 - 4.9): the student provides vague or not clear description of the research question(s), project's objective(s), and hypotheses or underlying assumption(s). Provides a vague or not clear explanation of the approach to the inquiry; Fails to logically describe planned approach. The research questions or project objectives do not match the method.

- Sufficient (5 - 6.9): the student provides limited specification of the research question(s), project's objective(s), and hypotheses or underlying assumption(s). Describes the research approach somewhat logically and unambiguously. The research questions or project objectives do not quite match the method.

- Good (7 - 8.9): the main issues in the area/topic are clearly identified; essential information is given to allow the audience to understand the topic.

- Excellent (9 - 10): the presentation demonstrates an outstanding command of the project's motivation and the question it addresses, highlighting the most important issues or areas of knowledge and presenting them coherently and lucidly.

Technical Content (20%)

- *Insufficient (0 – 4.9): the student shows little or superficial technical command of the software, models, or analysis. Explanations are vague, incorrect, or missing. Key assumptions, limitations, or methods are not understood or cannot be explained. Responses to the panel's questions reveal major gaps in technical knowledge.*

- *Sufficient (5 – 6.9): the student demonstrates basic technical understanding but explanations are uneven or lack sufficient depth. Some results or methods are described correctly, but inconsistencies or gaps are evident. The defense of technical choices is limited, with partial or uncertain answers to the panel's questions.*

- *Good (7 – 8.9): the student demonstrates solid technical competence. Explanations of software, models, or analysis are mostly clear and accurate, with only minor errors. Results and methods are well-understood and reasonably defended. Responses to questions show a good grasp of technical issues, even if not exhaustive.*

- *Excellent (9 – 10): the student demonstrates authoritative technical command of the software, models, and analysis. Explanations are precise, accurate, and well-structured. Methods, assumptions, and results are clearly justified and defended convincingly under questioning. Responses to technical questions are confident, insightful, and thorough. Demonstration (if given) is seamless, reliable, and strongly reinforces the defense.*

Visual Aids (20%)

- Insufficient (0 - 4.9): visuals lack effectiveness because they are any or all of the following: poorly prepared, uninformative, unattractive, or distracting. Visuals fail to complement and enhance the content.

- Sufficient (5 - 6.9): visuals are not entirely effective because they are not consistently well-prepared, informative, and attractive, and are sometimes distracting. Visuals inconsistently or poorly complement the content.

- Good (7 - 8.9): well-prepared, effective, informative, attractive, and not distracting. Visuals complement and enhance the content, with few exceptions.

- Excellent (9 - 10): exceptionally well-prepared: highly effective, informative, and attractive. Visuals complement and enhance the content.

Conviction and Passion (20%)

- Insufficient (0 - 4.9): the student does not demonstrate any conviction or motivation in what he is presenting. He or she demonstrates passivity in the presentation of his ideas and does not provoke enthusiasm at all.

- Sufficient (5 - 6.9): the student shows a certain conviction even if he or she does not really communicate. Although the student shows some action and resolution, she/he does not reflect high positiveness and conviction in the project or ideas.

- Good (7 - 8.9): the student shows a high conviction and he communicates perfectly her/his ideas. The student shows action and resolution, high positiveness and conviction in the project or in his/her ideas.

- Excellent (9 - 10): the capacity of conviction is outstanding and the student manifests a high level of self-confidence to develop the project or to present the thesis or project.