**Final PROJECT PROPOSAL MAE6291: IoT for Engineers**

**Spring 2025, Instructor: Prof. Kartik Bulusu (MAE Department, GWU)**

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| **Final**  **PROJECT TITLE** |  | **Category: Circle One** | Grad  Undergrad |
| **NAME or NAMES** |  | **DATE** |  |

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| 1. **INTRODUCTION** Central problem being addressed; Topic of study related to problem **[1.0 Points]** |
| **IMPORTANT:**   * **All proposals need approval of your instructor before starting.** * **If you are not allowed to continue your midterm project unless there are substantial and sweeping improvements and prior approval from your instructor.** * **Use one additional paper provided to describe in detail with a proper subheading** |
| 1. **BACKGROUND AND SIGNIFICANCE** Problem details; Rationale; Problems addressed; Research methods and sources. **[1.0 Points]** |
| * **Use one additional paper provided to describe in detail with a proper subheading** |
| 1. **LITERATURE REVIEW** Cite, Compare, Contrast, Critique, Connect **[2.0 Points]** |
| **IMPORTANT:**   * **Use one additional paper provided to describe in detail with a proper subheading.** |
| 1. **PROJECT DESIGN AND METHODS** Research operations and result interpretation methodology argument; Potential obstacles**[1.5 Points]** |
| **IMPORTANT:**   * **What IoT layered architecture model are you using for this project.** * **What is the role of each member of your team on that model ? Roles can overlap but there needs to be designated lead responsible of layer.** * **How is edge compute being implemented? What are the mathematics, signal processing and data visualization strategies/libraries used** * **Use one additional paper provided to describe in detail with a proper subheading.** * Refer to the following website for the available sensors that you can chose from <https://www.sunfounder.com/collections/raspberry-pi-kit-for-expert/products/sensor-kit-v2-for-raspberrypi> |
| 1. **PRELIMINARY SUPPOSITIONS AND IMPLICATIONS** Task division; Identify who is doing what if you are in a team of two **[2.0 Points]** |
| **IMPORTANT:**   * **If you are working in groups describe each member’s role and what they will contributing.** * **The task division will be evaluated toward the final individual grade on your project.** * **Tasks can overlap but there needs to be a designated lead for each task.** * **Use one additional paper provided to describe in detail with a proper subheading.** |
| 1. **SUMMARY** Why is this problem worth addressing; Why this problem is unique and how it advances existing knowledge **[1.0 Points]** |
| **IMPORTANT:**   * **Use one additional paper provided to describe in detail with a proper subheading.** |
| 1. **CITATIONS** References; Bibliography **[1.5 Points]** |
| **IMPORTANT: Citations must be presented in the following formal only and reference in the sections above or else this proposal is incomplete:**   1. G. Eason, B. Noble, and I. N. Sneddon, “On certain integrals of Lipschitz-Hankel type involving products of Bessel functions,” Phil. Trans. Roy. Soc. London, vol. A247, pp. 529–551, April 1955. *(references)* 2. J. Clerk Maxwell, A Treatise on Electricity and Magnetism, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68–73. 3. I. S. Jacobs and C. P. Bean, “Fine particles, thin films and exchange anisotropy,” in Magnetism, vol. III, G. T. Rado and H. Suhl, Eds. New York: Academic, 1963, pp. 271–350. 4. K. Elissa, “Title of paper if known,” unpublished |