

ECE 9603/9063 – Data Analytics Foundations

Project tips

Project - format

- Research students (MESc and PhD) and groups with at least one research student
 - IEEE conference format
 - Download template (Word or Latex)
 - Up to 8 pages
 - Submit: PDF file + code
- MEng students
 - Can be report style (no specifics as in IEEE style)
 - Submit: PDF file of your report + code

Project

■ Organization

- Abstract
 - Introduction
 - Background
 - Related work (mandatory for research, and optional for MEng)
 - Methodology/process (can give it a different name and split into multiple sections)
 - Evaluation/Results
 - Conclusions
 - References
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- Each section can be split into subsections
 - You can add additional section (for example discussion)

Project

■ Organization

- Introduction
 - Describe the context of your problem
 - Example: You are dealing with commercial building energy
 - Define the problem
 - Example: Predicting daily energy consumption for commercial buildings from sensor data readings
 - Why is the problem important?
 - Example: You want to predict energy consumption so building owners can budget for their energy spending
 - High level overview of how you solve it (one paragraph, the most two)
 - Example: This paper uses Support Vector Machine with sliding time window to predict energy consumption
 - Paper/report organization
 - Example: This paper is organized as follows: Section 2 presents...

Project

■ Organization

- Background
 - Short introduction to the used algorithms and accuracy measures
 - This is only generic, and nothing about how you used it or your data
 - Research students - keep it to half page, max one page
- Related Work (mandatory for research, and optional for MEng)
 - How did others tried to solve the problem
 - How is your approach different from the others
 - As this is a project for the course, few related works are sufficient

Project

■ Organization

- Methodology/process (can give it different name)
 - This section describes how you applied an approach or an algorithm
 - Data preprocessing (cleaning, normalization, windowing...)
 - Feature engineering
 - Validation process (hold-out, k-fold...)
 - No results
 - No code
 - You can include formulas to show how you calculated different thing (not for a specific programming language)

Project

■ Organization

- Evaluation/Results
 - Results of the process you applied
 - You can include a paragraph describing what languages, package, and libraries you used
 - Possibilities:
 - Accuracy measures
 - Graphs showing tuning process
 - Tables and graphs comparing different approaches
 - Tuned parameter ranges and selected values
 - ...
 - No code (code is submitted separately)

Project

■ Organization

- Conclusions
 - Short summary of the paper/report
 - Should include: problem description, how you solved it, and main results – focus on results
- References
 - IEEE style [1] [2]
 - Make sure you include all information for all you references