**ECE 579 Intelligent Systems, Winter 2024**

**Final Project Report**

**Project title: Facial Expression Recognition System for Personalized Vehicle Settings.**

**Students in the project group: Luis Castaneda-Trejo (Team Leader) and Julio C Murillo**

Department name(s)

Responsibilities of each student:

**Page limit 5, including everything**

1. Introduction
   * Topic of your project
   * Background information
   * Brief summary of what you are presenting in the report
2. Description of technologies related to your project (e.g. technologies related to moving vehicle detection)
   * These technologies are broad, these technologies can be
     + Well known functions/algorithms developed by researchers to solve the same problems related to your project topic
   * It may be necessary to search beyond websites:
     + Recent developments in knowledge discoveries, theories, algorithms, published research journals, conference proceedings, etc.
3. Methods used in your project
   * Describe your work
   * Evaluate your results
   * Discuss your results
4. Experiments
   * Data
   * Experiments conducted
   * Present and discuss your results
5. Conclusion
   * A brief summary of what you have done
   * A description of what you have learnt from this project
6. References as needed.

All reference papers should be presented in the following format.

Sample Format:

[1] A. A. Malikopoulos. “Supervisory Power Management Control Algorithms for Hybrid Electric Vehicles: A Survey”. IEEE Transactions on Intelligent Transportation Systems, PP(99):1–17, March 2014.

[2] A. Kahrobaeian, B. Asaei, and R. Amiri. “Comparative Investigation of Charge-Sustaining and Fuzzy Logic Control Strategies in Parallel Hybrid Electric Vehicles”. In IEEE Vehicle Power and Propulsion Conference, 2009. (VPPC 2009), pages 1632–1636, September 2009.

[3] S. G. Li, S. M. Sharkh, F. C. Walsh, and C. N. Zhang. “Energy and Battery Management of a Plug-In Series Hybrid Electric Vehicle Using Fuzzy Logic”. IEEE Transactions on Vehicular Technology, 60(8), October 2011.

[4] Eby, D.W., Molnar L.J., & St. Louis, R.M. *Perspectives and Strategies for* *Promoting Safe Transportation among Older Adults*. Cambridge, MA: Elsevier Inc. 2019

[5] J. Park, Z. Chen, L. Kiliaris, M. L. Kuang, M. A. Masrur, A. M. Phillips, and Y. L. Murphey. “Intelligent Vehicle Power Control Based on Machine Learning of Optimal Control Parameters and Prediction of Road Type and Traffic Congestion”. IEEE Transactions on Vehicular Technology, 58(9), November 2009.

[6] <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/100carmain.pdf>, Accessed by June 10, 2020