**Life Cycle Analysis of Commuter Routes to Illinois Institute of Technology**

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Greenhouse gas emissions have exponentially increased over the past century due to growing urbanization and development of industry. Transportation makes up the largest percentage of greenhouse gas emissions in the US at 29% in 2019, meaning a large impact can be made with changes in how humans move around not just in Chicago but in the US as a whole [1]. The utilization of other modes of transportation including rail, bike, bus travel, ebikes, and walking could positively impact the environmental damage of single passenger vehicles by diversifying the way people travel. Understanding how each mode of transportation affects not only the environment but the individual's travel experience can help communities promote alternative transportation options to cars. This project focuses on Illinois Tech commuters by looking at a life cycle analysis of the different options for travel by quantifying the carbon emissions, time spent traveling, and cost of each mode of transportation. The GREET model developed by Argonne National Lab is used in developing the environmental impact of the modes of travel [4]. A comparison of each option’s cost, time, and emissions will determine the best mode of transportation when prioritizing different aspects to the commute. The results of this project will help understand the role the IIT community plays in the Chicago area’s use of transportation options and how individuals would be impacted by choosing different modes of commuting to campus.