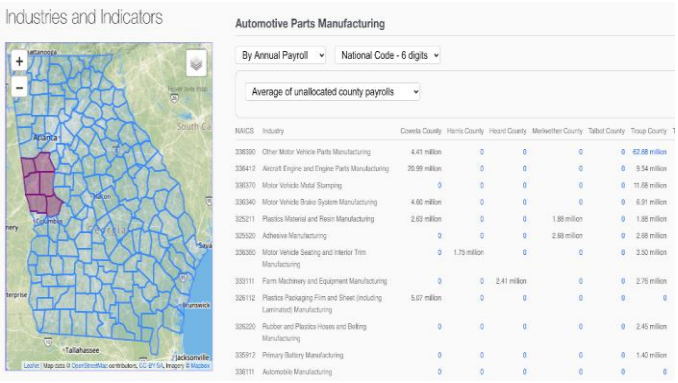
I belong to a generation that has received the privilege and the responsibility to make changes in how we relate with our planet. Previous generations were in a sense blinder of the effects of their decisions on our ecosystems. Currently, we are facing two of the most important environmental problems in all times, climate change and biodiversity loss, and the responsibility to solve them is in human hands. We can be the generation that continues with the consumerism model where only money and comfort matters or we can be the inflection point towards a more sustainable economy and personal habits.

As an industrial engineer, I have been able to learn and use a variety of quantitative tools, models and data analysis that help and support better decision making. Since I was taking my undergraduate classes, I was always wondering how I can use all these tools outside traditional industrial engineering applications as logistics, production and finance, for example.



In particular, I have always wanted that the objective behind the improvement in decision making isn't money, I want to go beyond minimizing costs or maximizing profit. That is why some time ago I decided to devote my knowledge to support better human decision making about environmental problems. My path toward this decision has started with my PhD in industrial engineering in the Economic Decision Analysis track at Georgia Tech with a minor in environmental economics. Here I have been able to develop research that integrates this motivation and my current expertise. I am working on biodiversity impacts of pellet production and the environmental impacts of biofuels.

This summer, I had the great opportunity to integrate various of my abilities into a project which objective is to aid communities' decision making. In specific, the project wants to help Georgia communities to understand its current environmental impact, from their industries and products, but also to be able to assist the decision of future investments. For this, US Environmental Protection Agency (EPA), in conjunction with Georgia Department of Economic Development (GDEcD), has developed tools that allow understanding current

environmental impacts through indicators as Greenhouse Gas emissions (GHG), water use and water contamination, between others.

My role was to help to include new technologies that could be part of a future bio-economy in Georgia. I started, with the support of my mentors, including 2nd generation biofuels that take advantage of the potential availability of wood residues, wood waste and Municipal Solid Waste (MSW) in Southeast Georgia to produce biofuels.

Through my experience with EPA, I wasn't only able to improve my programming skills and learning about new models, but I was able to contribute in the construction of a model that allows us, as individuals, but also industries and government to understand the environmental and social impacts of our decisions in terms of products consumed and produced in the US and in this way contribute to a more sustainable decision making.

As some time ago I heard, is data that allows us to understand the problem, and it is with data that we can start constructing solutions.

If you are interested in knowing more about these tools that EPA is constructing you can go to https://www.epa.gov/smm/smm-prioritization-tools-index

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