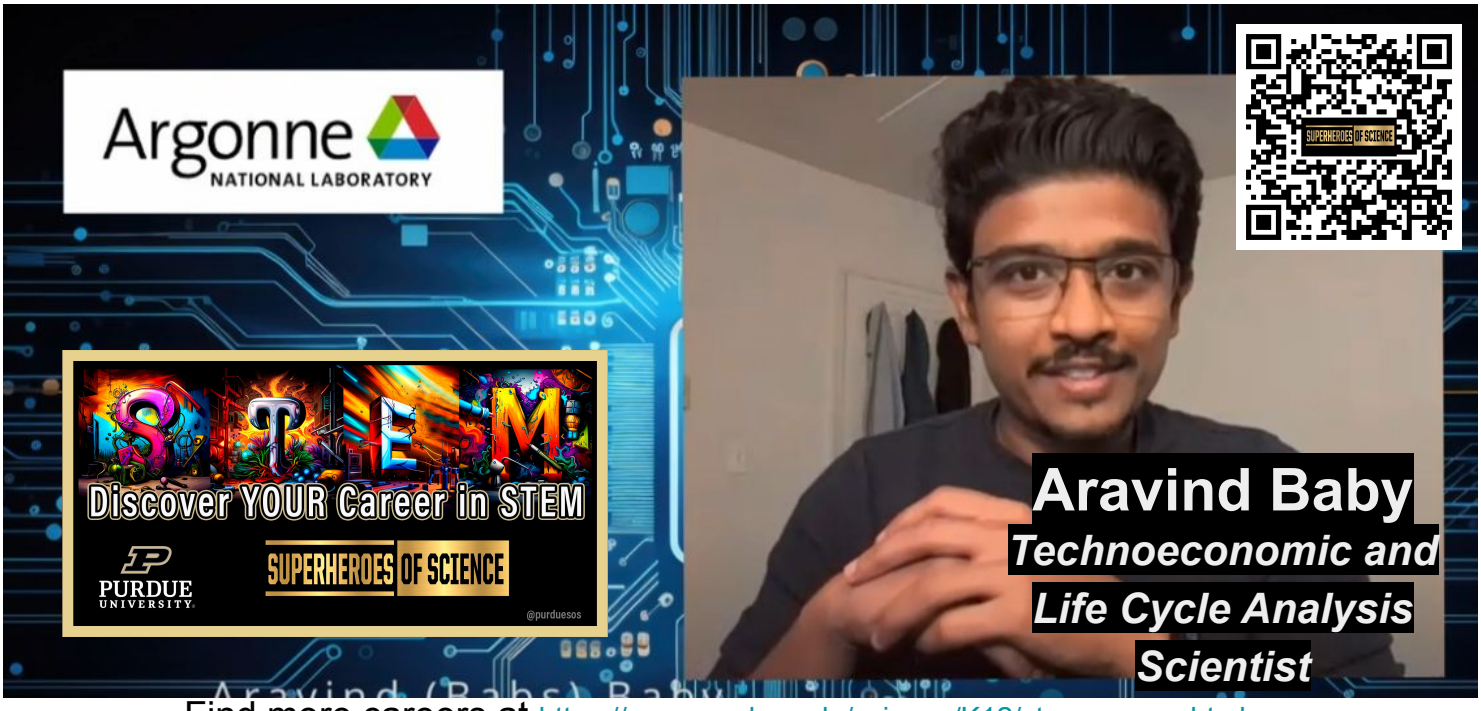


Find more careers at https://www.purdue.edu/science/K12/stemcareers.html

Dr. Aravind (Babs) Baby is a Technoeconomic and Life Cycle Analysis Scientist who is working to prepare the world for a more sustainable future by comparing different battery recycling strategies based on both their environmental and economic impacts.

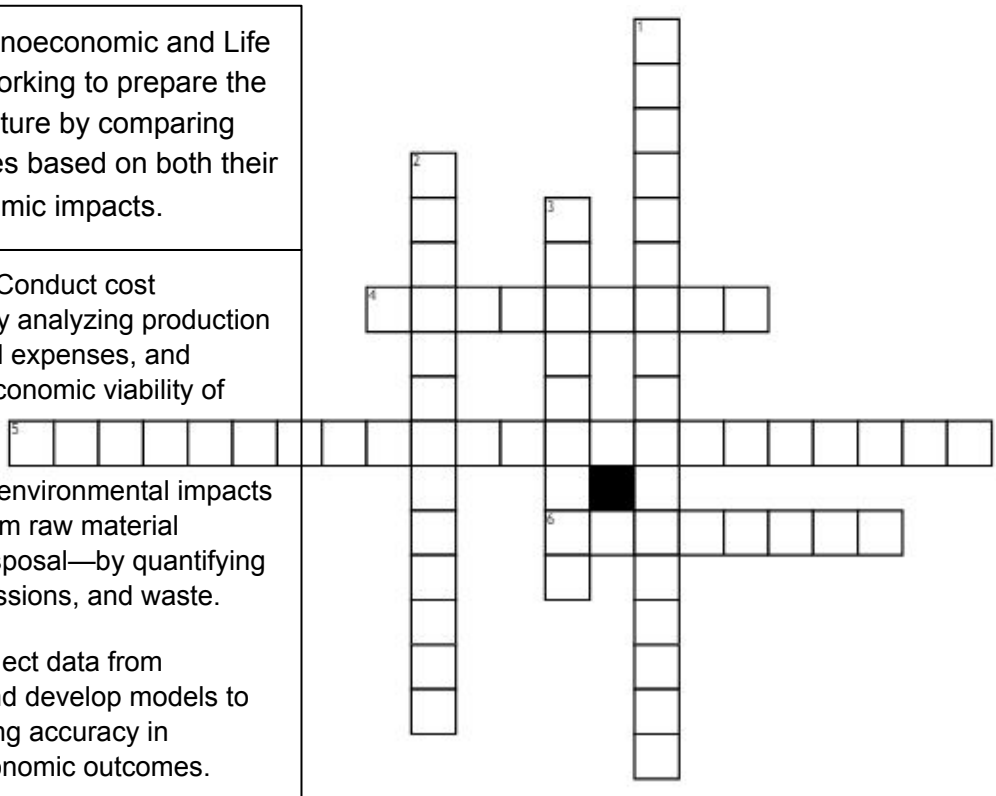
Technoeconomic Analysis (TEA): Conduct cost assessments for new technologies by analyzing production costs, capital investment, operational expenses, and potential revenue to determine the economic viability of projects.

Life Cycle Analysis (LCA): Assess environmental impacts throughout a product's life cycle—from raw material extraction, production, and use to disposal—by quantifying energy, water, and material use, emissions, and waste.

Data Collection and Modeling: Collect data from experimental or industrial sources and develop models to simulate different scenarios, improving accuracy in projections of environmental and economic outcomes.

Interdisciplinary Collaboration: Work closely with engineers, environmental scientists, and economists to ensure that analyses are technically sound and aligned with project goals.

Reporting and Documentation: Prepare technical reports and communicate findings to stakeholders, including presenting economic and environmental trade-of to guide decision-making.



Across

4. A product's _____ includes raw material extraction, production, use, and disposal.
5. What is TEA?
6. Collaboration between scientists, engineers, and economists ensure that _____ are technically sound.

Down

1. What is LCA?
2. Battery recycling strategies can be based on _____ and economic impacts.
3. Scientists must prepare _____ reports to communicate their findings.