

In-depth analysis of solar panels and wind turbines for the future of renewable energy

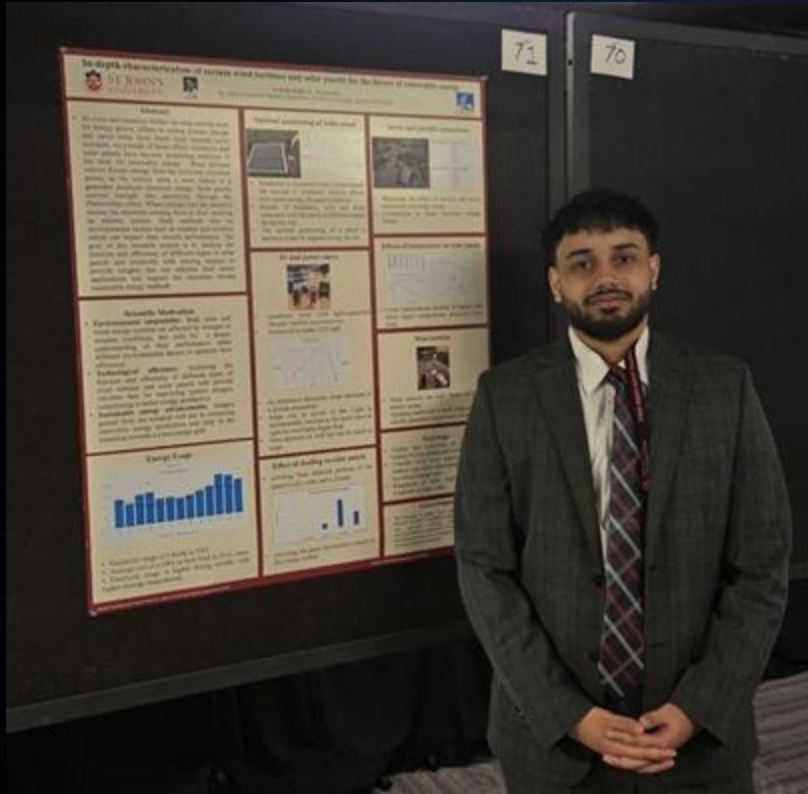
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Who am I



- **Name:** Alexander Ram-Singh
- **Current Status:** Junior at St. John's University
- **Major:** Physics (Bachelor's degree)
- **Plan:** Continue education in graduate school after completing my bachelor's degree

Motivations

- **Assess Weather Impact:** Evaluate how different weather conditions affect solar and wind energy performance.
- **Optimize Efficiency:** Examine system behaviors in various climates to enhance overall energy output.
- **Cut Costs:** Use renewable insights to help consumers lower their energy bills.
- **Boost Resilience:** Develop systems that reliably perform despite weather variability.
- **Foster Innovation:** Leverage weather data to drive new renewable energy solutions.

Research Overview



Research Project Overview

- **Energy Production Analysis:**
 - Examined solar panels and wind turbines under varying conditions.
- **Investigated Factors:**
 - Temperature variations
 - Different levels of sunlight exposure
 - Shading effects
- **Detailed Analysis:**
 - IV curve analysis for solar panels
- **Optimization Approach:**
 - Utilized a solar pathfinder to maximize energy production
- **Ultimate Goal:**
 - Reduce the cost of energy for homes

Poster Presentation

- Thank you for your time.
- Research results will be available at my poster presentation.
- Please feel free to stop by with any questions or feedback.
- Thank you again!

Acknowledgements

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