**Major Research Project**

1. **Problem Statement**
2. **Objectives**

* **General Objectives**
  + Enhance beach safety for visitors
  + Improve the overall visitor experience at Bruce County's beaches
  + Support early hazard detection and timely response
  + Contribute to the effective management of beach capacity
* **Specific Objectives**
  + Implement smart beach technology that monitors water conditions, such as wave height, water temperature, and water currents
  + Utilize monitoring cameras to assess beach overcrowding and manage beach capacity effectively
  + Develop an accurate prediction model for rip currents to improve hazard awareness and prevention
  + Create an accessible, user-friendly platform that delivers real-time updates and alerts to beachgoers and relevant authorities

1. **Methodology**
2. Project planning:
3. System analysis:
4. System Design: