**1. Introduction to the Concept**

**Goal**: Explain the significance of agricultural robotics.

Resources:

* **Articles**:
  + "The Future of Agricultural Robots in Precision Farming" [Link](https://www.sciencedirect.com/science/article/abs/pii/S0168169919303857).
  + "Global Trends in Agricultural Robotics and Automation" from Springer.
* **Books**:
  + *Robotics and Automation for Sustainable Agriculture* by Mark Crosbie (available on Springer).
  + *Agricultural Robotics: Mechanisms and Practice* by Qingwen Ma.
* **Videos**:
  + "The Role of Robots in Modern Farming" [YouTube](https://www.youtube.com/).
  + TED Talk: *Robotics in Agriculture: The Future of Farming*.
* **Websites**:
  + [International Federation of Robotics (IFR)](https://ifr.org/) - Reports on agricultural automation trends.

**2. Challenges in Harvesting Automation**

**Goal**: Identify barriers to implementation.

Resources:

* **Articles**:
  + "Technical Challenges in Robotic Fruit Harvesting" (Journal of Field Robotics).
  + "Navigational Complexity in Automated Agriculture" (Elsevier).
* **Books**:
  + *Challenges in Robotic Applications for Agriculture* by Samuel Baron.
* **Videos**:
  + “Barriers to Automation in Agriculture” [YouTube](https://www.youtube.com/).
* **Websites**:
  + [AgFunder News](https://agfundernews.com/) - Insights on agricultural technology.

**3. Proposed Solution**

**Goal**: Present a concept for a robotic harvesting system.

Resources:

* **Articles**:
  + "Implementing LiDAR and Computer Vision in Agri-Robotics" (IEEE Transactions).
  + "AI in Robotic Agriculture" (Journal of Artificial Intelligence Research).
* **Books**:
  + *Practical Robotics in Agriculture* by Amir Gharabaghi.
* **Videos**:
  + "How Computer Vision Powers Agricultural Robots" [YouTube](https://www.youtube.com/).
  + Tutorials on LiDAR and GPS for obstacle avoidance [Coursera](https://www.coursera.org/).
* **Websites**:
  + [OpenCV](https://opencv.org/) - Tutorials on AI and Computer Vision.

**4. Advantages and Limitations**

**Goal**: Evaluate the proposed solution.

Resources:

* **Articles**:
  + "The Cost-Benefit Analysis of Robotic Harvesting" (Journal of Economic Agriculture).
* **Books**:
  + *Sustainability in Agricultural Robotics* by Linda Hayes.
* **Videos**:
  + “Comparing Traditional and Robotic Farming” [YouTube](https://www.youtube.com/).
* **Websites**:
  + [Agricultural Robotics Research Journal](https://agrirobotics.com/).

**5. Future Perspectives**

**Goal**: Explore advancements to overcome limitations.

Resources:

* **Articles**:
  + "Swarm Robotics: The Next Frontier in Agriculture" (Springer).
  + "Edge Computing for Real-Time Robotic Agriculture" (IEEE).
* **Books**:
  + *Emerging Technologies in Precision Agriculture* by Robert Geiger.
* **Videos**:
  + "Swarm Robots in Agriculture: A Game-Changer" [YouTube](https://www.youtube.com/).
* **Websites**:
  + [FarmBot](https://farm.bot/) - Open-source solutions for agricultural robotics.