PROJECT NAME	**Using remote sensing and artificial intelligence to measure trade node activity and beyond**		
JOB LOCATION	Washinton D.C		
EST. START DATE	08/24/2023	**EST. FINISH DATE**	12/18/2023
PROJECT LEADER	Satya Prasad Sahu	**COMPANY**	World Bank
CONTACT NAME	Satya Prasad Sahu	**ADDRESS**	
PHONE			
EMAIL	ssahu8@worldbank.org		

SUMMARY	This project has a primary goal: to develop a reliable and scalable system for estimating trade volumes at international border crossings, with a specific focus on monitoring vehicle occupancy in the parking lots at these border points. Initially, our study will concentrate on two strategic crossings in India-Bangladesh and Zimbabwe-South Africa, with plans for extending these methods to similar sites across Africa and Asia. **Key Project Phases:** **Parking Lot Occupancy Monitoring:** A crucial aspect of our project involves monitoring vehicle occupancy in the parking lots at border crossings, providing insights into trade activities. **Trade Asset Identification:** Our project will utilize high-resolution data to identify and track trade-related assets, including vehicles, and will address the challenges of distinguishing between different types of vehicles. **Transfer Learning:** Exploring AI-based transfer learning, we will adapt our methods to new sites, optimizing for cost-effectiveness and scalability.
DESIRED OUTCOME	The desired outcome of the project is to create a scalable monitoring system that utilizes Earth observation data and artificial intelligence to accurately determine vehicle occupancy, estimate traffic volume, track and identify vehicles, and scale the solution for broader application in Africa and Asia. This project aims to enhance trade efficiency and security at border crossings.
ACTION TO COMPLETION	Develop a clear research methodology. Establish a data preprocessing pipeline. Implement AI model. Explore transfer learning for extrapolation. Optimize costs and minimize reliance on commercial data. Design for scalability across different sites. Maintain thorough documentation and reporting.
BENEFITS OF PROJECT	**Trade Promotion:** Enhances international trade by providing transparent and accurate data. **Transparency:** Builds trust and reduces disputes by offering clear insights into trade operations. **Informed Decision-Making:** Empowers policymakers and businesses to make better trade-related decisions. **Economic Growth:** Contributes to economic growth, job creation, and improved living standards. **Cross-Border Collaboration:** Fosters cooperation and diplomacy between nations. **Resource Optimization:** Efficiently allocates resources, reducing costs and improving competitiveness. **Risk Mitigation:** Identifies and mitigates security risks, ensuring smooth trade operations.

PROJECTED SCHEDULE	Project Timeline: August 24 - December 18 1. Setup and Planning (Weeks 1-3) - Define objectives and scope. - Create project plan. - Assign roles. 2. Data Collection and Prep (Weeks 4-8) - collect and organize the data. - Process SAR and optical data. 3. Data Analysis and Model Dev (Weeks 9-12) - Develop AI models. - Test and validate. 4. Transfer Learning & Optimization (Weeks 13-15) - Explore transfer learning. - Optimize for efficiency. 5. Project Finalization (Weeks 16-17) - Document project. - Review and submit by Dec 18.
PROJECTED BUDGET	
PROJECTED TEAM AND RESOURCE REQUIREMENTS	Shumel Siraj, Rajkumar Conjeevaram Mohan, Adhithya Kiran, Daniel Saslavsky, Satya Prasad and Michael Schultz
PROPOSAL MAY BE WITHDRAWN IF NOT ACCEPTED BY DATE OF	

ACCEPTANCE OF PROPOSAL			
AUTHORIZED CLIENT SIGNATURE		**DATE OF ACCEPTANCE**	