



Trust-Based Peer-to-Peer Luggage Delivery SAAS Platform using MERN and Machine Learning

We're building a saas platform that leverages unused luggage space in flights and through travelers offering faster, reliable and cheaper delivery of goods.





Introduction

A saas platform that lets users send items abroad through travelers.In current time millions of people fly from point A to B carrying less than their permitted luggage weights.Our platform lets travellers carry item for a potential sender.Benifitting both the traveller as carrier and the sender.In a more faster,reliable and cheaper way anybody can send their items to anywhere.



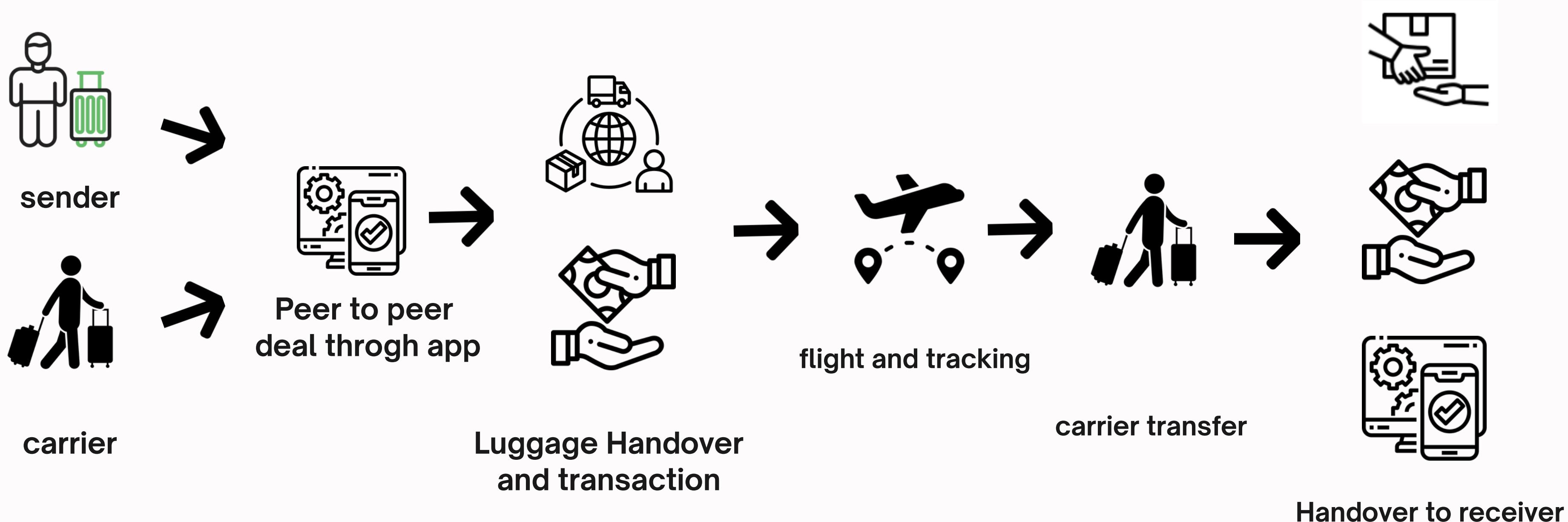
Problem Statement and solution

International travelers often have unused luggage space and large amount wait for a long time for someone know travelling or themselves to send goods to their close ones.Courier services are really time-lengthy and costly.We introduce a solution for both of this parties,through saas platfrom a sender can send good through a travller choosen by each others preferences,location and other metrics through ai. Using Machine learning models for prediction,precision and convinience of both peers makes it reliable and precise.



Over 12 million people travel by flight everyday

SAAS workflow



Novelty / Research Contributions

- ML-based explainable trust scoring
Route + risk-aware optimization
- ML-based anomaly detection
- Privacy-preserving ID verification



System Architecture (Technical Overview)

- React (Web) + React Native (Mobile)
- Node.js + Express (APIs, Socket.IO)
- MongoDB
- Flask/FastAPI
- Storage: AWS S3

Data Flow

- Arrows represent the flow of data between components:
 - a. User input on the frontend sends requests to the backend.
 - b. Backend processes data and communicates with the ML microservice for trust scoring or anomaly detection.
 - c. Database stores results, logs, and user-related data.
 - d. Media content like photos are uploaded to AWS S3.



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everyday*

Goals

Our service is designed to provide fast, cost-effective, and efficient delivery solutions. With features like smart tracking and the ability to choose products by weight, we ensure a seamless experience for our customers.

01



Faster delivery

Instant Delivery:
Provide fast, reliable delivery,
similar to self-handling services.

02



Package Tracking

Smart Tracking:
Implement intelligent tracking for
real-time updates and route
optimization.

03



Pricing

Choose Product by Weight (kg):
Allow customers to select
products based on weight (kg) for
more accurate pricing and
delivery.

04



Cost Effectiveness

Cost-Effective:
Ensure affordable services
without compromising on quality
or efficiency.

05



Trustworthiness

Increasing trust but both end
authentication and previous
records

06



Legal Issues

Elimination of legal issues for
carrier, checked luggage and
formalities in compliance with
foreign country legislation

07



Suitable Weights

Choose Product by Weight (kg):
Allow customers to select
products based on weight (kg) for
more accurate pricing and
delivery.

Project Timeline

The project will span 7 months, focusing on backend and frontend development, machine learning integration, and pilot testing. By month 7, the final evaluation and report preparation will be completed.



Machine Learning Modules



Trust Scoring

- Input: KYC status, past deliveries (success/failure), avg_delay, complaint_count, avg_rating, route_consistency
- Model: Neural Network
- Output: Trust score (0–1) + Discrete level: High / Medium / Low

Carrier Suggestion

- Input: Ship request (origin, dest, date, package type, budget), carrier availability, trust_score (Model A), route_similarity, estimated_cost
- Model: XGBoost / Learning-to-Rank (LambdaMART)
- Output: Ranked list (Top-N carriers (score + confidence) + why recommended)

Ethical Concerns

- Privacy & Consent: Encrypt user data and share only with consent.
- Fairness: Keep ML models unbiased across all carriers.
- User Control: Allow users to delete data anytime with limited retention.

Ethical, Legal, and Future Work

A secure and intelligent platform ensuring fair, privacy-focused, and legally compliant carrier matching with future-ready upgrades for transparency and global expansion.

Legal Considerations

- Compliance: Follow transport, customs, and airport security regulations.
- Data Laws: Align with GDPR-style principles and Bangladesh Digital Security Act.
- Verification: Enforce KYC and background checks for all carriers.

Future Enhancements

- Blockchain Logs: Provide immutable delivery tracking for accountability.
- Federated Learning: Train models privately without sharing raw data.
- Global Expansion: Partner with airlines and logistics for scalability.

Statistics

- Around 10 million passengers flew daily worldwide.
- 20,000 passengers traveled daily on international flights from and Bangladesh to various countries.

Key routes for Bangladesh are:

Middle East: Dubai, Doha, Abu Dhabi, and Riyadh are major destinations.

Southeast Asia: Bangkok, Kuala Lumpur, Singapore.

Europe & North America: London, New York, and Toronto.

Statistics

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Aliquam semper ipsum urna, nec cursus dolor dictum nec.
Donec luctus mauris quis cursus.



New Customers

.....● saas landing page through seo and marketing targeting growing international students and high amount of people living in middle east. For bangladesh more than 50 customer out of 15000 travelers which is 1% or everyday customer is necessary to sustain a business with a profit margin.

Recurring Carriers and Sending customers

"Building Trust with Recurring Customers: Our loyal customers, including overseas workers, students and NRB will continue to choose our services for consistent quality, timely deliveries, and a reliable experience every time." Projecting that 25% of all customer will be recurring.

Our Team

"We are a team of three CSE professionals with a strong business mindset, blending technical expertise and strategic vision to drive innovation and deliver impactful solutions."



A.Alim



Farea Mahdea



Anik Barua



Studio
Shodwe

THANK YOU