# Pet Track System Using Blockchain

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# Overview

- Problem and Necessity
- Solution - Model
- Intrinsic Value
- Widespread Effect
- Team Members and Their Duties
- Work Packages

# Problem and Necessity

- Problem: Tracking of shelter, pet, and street animals.
- Necessity: Ensuring a safe and clear relationship between humans and animals.

# Solution - Model

- There will be 2 types of users: Authorized People and Daily User
- Authorized People (AP): They are responsible for the animals and generally work at a vet or shelter. APs must be members of the system.
- Daily User (DU): They can be anyone, even if they don't have any pets. DUs don't have to sign up for the system, but if they own a pet, they must.
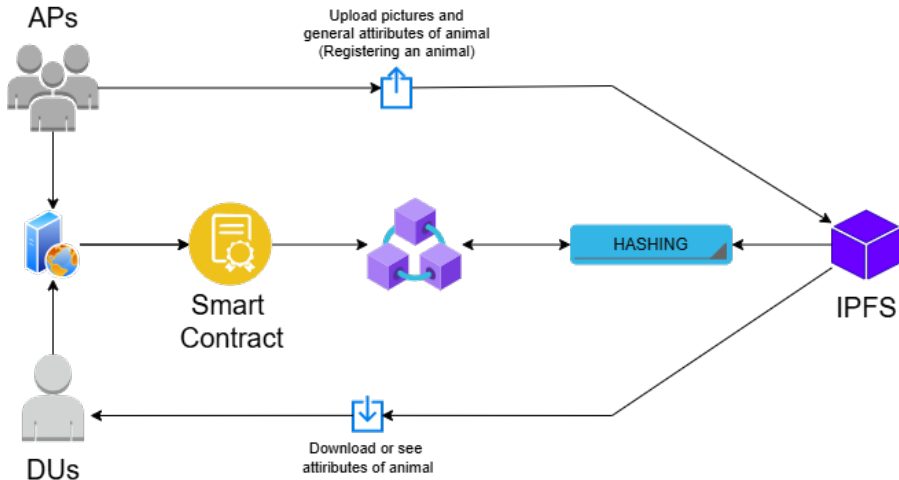
# Example Model



Figure: Project Model

# Explanation of Model

- Step 1: Registering an Animal

  An authorized person can add an animal.The registration of an animal require both wriding on Blockchain and IPFS. This will be first transaction of an block.

# Explanation of Model

- Step 2: Processing to Animal

  If a vet vaccinates an animal, this process will be write to block. This transaction will be there forever and cannot be changed.

# Explanation of Model

- Step 3: Finding Out Animal Information

  A person (not just system users) can search an animal according to their ID. In the back-end, the system will show the information of the animal from IPFS. And there will be a button to see all transaction history. So anyone could check any animal.

# Explanation of Model

- Step 4: Adopting an Animal

  A user can search an animal that lives in vet, or animal shelter. The user can see attributes and transactions. If wants to adopt one, sends a request, and the system shows an alert to authorized people. They check the requirements of the user (house with garden for a Golden, etc.). If the user meets the requirements, they can adopt the animal. And the user selects a date to come and adopt the animal

# Intrinsic Value

- There are excess amount of street animals in Turkey. These animals may be dangerous to humans, especially children. We think the reason this is happening is because we don't adopt enough animals and the shelter system is disorganized. With this system we aim to track every animal registered to the system flawless. We are going to know who owns which animal. We also can follow the animals without a owner better. This means if a animal disappears from the shelter the shelter have to give a reason for disappearance. If we found an animal on the street we can access it's medical background.

# Widespread Effect

- Tracking pet,shelter and street animals will become easy,this will provide the government to apply their policy easily. This causes dealing with excess amounts of animals easy. As the control over animal population on the street increases, animals attacking children will decrease this would make the streets more peaceful.

# Team Members and Their Duties

- Rıdvan Barış Özden: Development of smart contracts.
- Ozan Uslan: Integrasion of IPFS and development of web UI.

# Work Packages

| Work Package Number | Work Package Name and Objectives | Who Will Carry It Out | Time Frame | Success Criteria and Contribution to the Project's Success |
|---|---|---|---|---|
| 1 | Designing a user-friendly and simple web interface. | Ozan Uslan | 0-1 ay | 25% |
| 2 | Using IPFS for storing user information, animal data, and other details in a decentralized database. | Ozan Uslan | 1-2 ay | 25% |
| 3 | Creating a smart contract to ensure that each transaction is written to the block in an immutable and transparent manner. | Rıdvan Barış Özden | 0-2 ay | 25% |
| 4 | Checking the user's capabilities to adopt the animal. | Rıdvan Barış Özden | 1-2 ay | 25% |

Figure: Work Packages

# Thank you. Q&A ...