

# Medio

Your personal health weatherman

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# 01. **Echipa noastră**

# ECHIPA NOASTRĂ



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Mobile Developer &  
PM



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Backend Developer



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FrontEnd  
Developer & BA



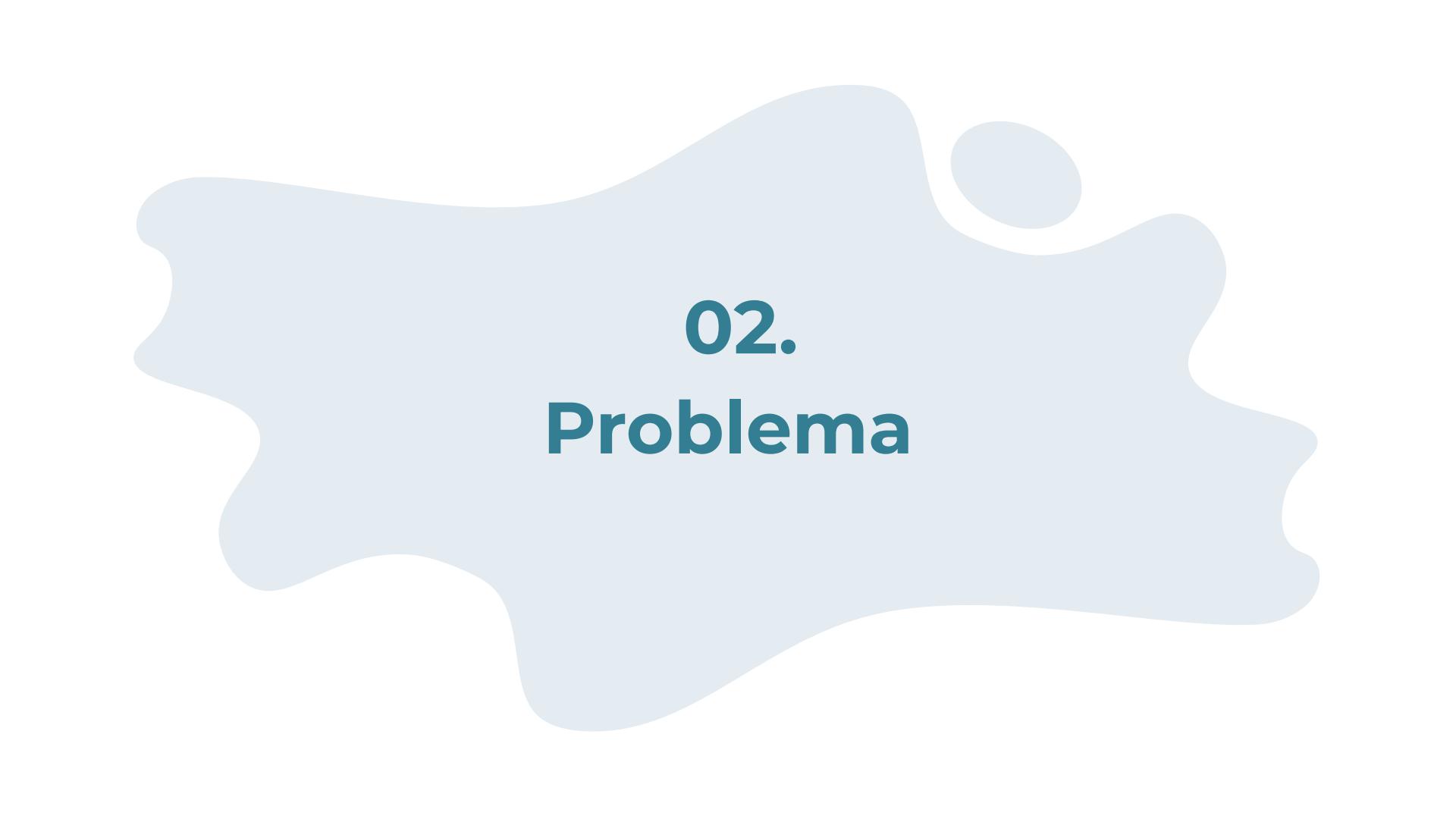
**Demian Ema**  
Mobile Developer &  
UI/UX



**Zirbo Samuel**  
ML Engineer

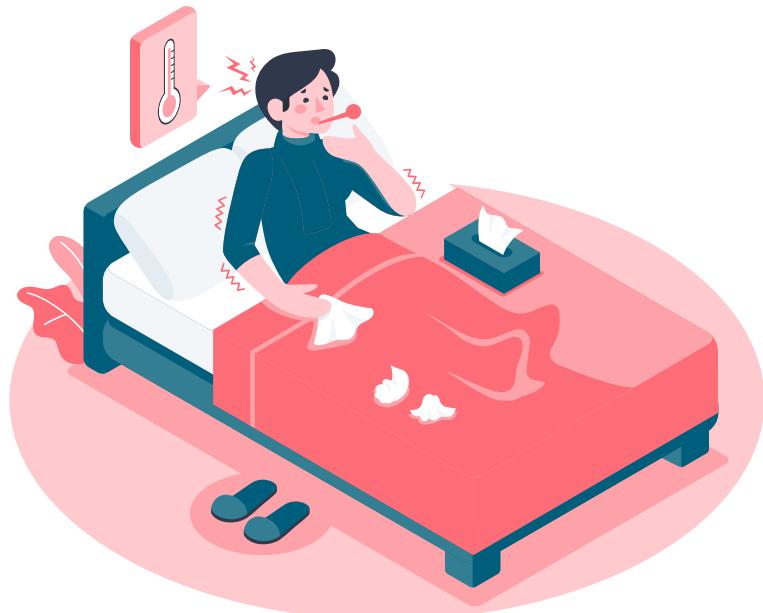


**Hoszu Bernadett**  
ML Engineer



## 02. **Problema**

# PROBLEMA



- Avertizările de temperaturi extreme sunt stabilite la modul general, pe baza unor convenții.
- Indivizii pot reacționa diferit la acestea, în funcție de problemele lor de sănătate.

## Oportunități de piață:

- ~ 54.000 spitalizări/an  
Cluj-Napoca
- 15 spitale private în Cluj-Napoca
- 159 spitale private în România

## Nevoile adresate:

- Lipsa corelației între starea de sănătate a individului și temperaturile extreme
- Lipsa prezicerii unui val mare de pacienți în funcție de vreme



## 03. **Modelul de business**

## DEMOGRAPHICS

People with health problems

16+

Living in Romania

## SAYS

I want to go on my daily walk outside in safe conditions for my health

I cannot go out today

I get scared of heat

My shoulders don't hurt me anymore!

I hope I won't feel unwell due to the temperature outside

I don't like hospitals

Thinks about repercussions of going outside

## DOES

Listen to the news to find out about the weather today

Open mobile weather app

Ask close people for their opinion

Takes unnecessary risks

Unsure to go outside

Overwhelmed by complicated mobile apps



Andrew

## THINKS

## GOALS

Hangout with friends

Go on daily walks

Do groceries

Live stressfree

## PAIN POINTS

The news or the weather mobile app are not personal for my personal health problems

## FEELS

Scared of death

Overwhelmed by complicated mobile apps

## DEMOGRAPHICS

Medical staff

Private hospital

Working in Romania

## SAYS

I have so much work to do today

How can I organize my schedule?

I want to be prepared for a large amount of patients

I need real time info

I need real time info

I hope I can help as many people as possible

I need a better monitoring of patient state

## DOES

## FEELS

Writes manual reports about patients

Medical Staff

## DOES

Tired

Overwhelmed

Treat all the patients in need

## DEMOGRAPHICS

They are unprepared for unexpected big flow of patients

Patients are unpatient

Doctors do not have a personalized relation with patients state

## PAIN POINTS

# Value proposition

Alătură-te unei noi ere de gestionare a sănătății! Aplicația noastră prezice risurile de spitalizare bazate pe condițiile meteorologice și evoluează cu feedback-ul tău, oferindu-ți o experiență special creată pentru tine.



Revoluționează îngrijirea pacienților cu ajutorul aplicației noastre! Aceasta utilizează prognozele meteorologice și feedback-ul pacientului pentru a monitoriza în timp real evoluția sănătății acestuia.



# Problem

List to 1-3 problems to solve

Lack of correlation between weather and individuals health problems

Doctors are overwhelmed by waves of patients

Weak relationship between doctors and patients state

# Existing Alternative

List how these problems are solved today.

Doppler: Weather & Health (not available in Romania)

RoAlert (not personalized for individuals)

Weather&Health Live Forecast (not available in Romania)

# Unfair Advantage

*Something that cannot easily be bought or copied.*

Lack of competition on the market

# Unique Valuable Proposition

*Single, clear, compelling message that states why you are different and worth paying attention.*

Step into a new era of proactive health management. Our app predicts health changes based on weather and evolves with your feedback, delivering a continuously improving health management experience just for you.

Revolutionize patient care with our app! It uses weather predictions and user feedback to constantly improve health management. Stay at the forefront of healthcare with the latest insights.

# High-Level Concept

*List your X for Y analogy, e.g. Youtube = Flickr for videos.*

Medio: Your Personal Health Weatherman.

## Solution

Outline a possible solution for each problem.

Mobile app  
for  
notifying  
user

Desktop  
app for  
hospitals

AI based model  
predicting  
personalized risk

## Key Metrics

List key numbers that tell you how your  
business is doing.

Number  
of users

AI  
model's  
accuracy

High-  
availability

## Channels

List your path to the customer (inbound and/or outbound)

Hospitals  
recommendation

Social  
media

User  
referrals

## Customer Segments

Something that cannot easily be bought or copied.

Designed for  
everybody,  
especially  
elders

Doctors

Hospitals

## Early Adopters

List the characteristics of your ideal customers.

Doctors eager  
to have a closer  
relationship  
with their  
patients

People who  
want to feel  
safer

Private hospitals  
which want to  
be aware of the  
patients flow

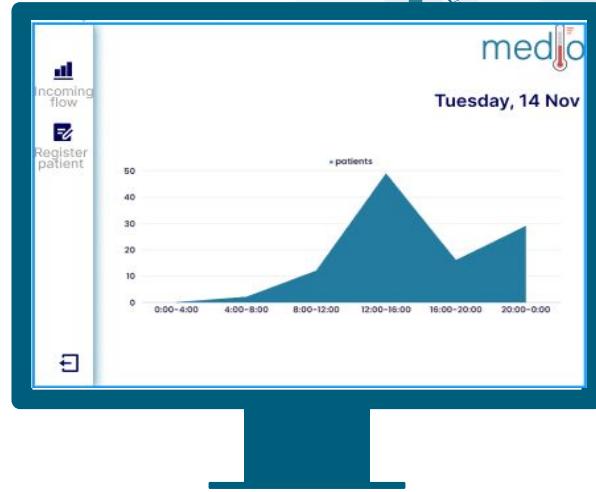
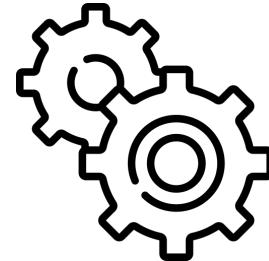


## 04. **Soluția**

# Soluția



ecosistem



# **Componența de inovare**

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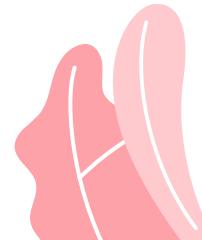
## **Învățare automată/Machine Learning**

### **Modelul pentru spitale:**

Regresie pe numărul de pacienți primiți la urgențe într-o zi.

### **Modelul pentru pacienți:**

Clasificare pe 3 clase răspândite de urgențe medicale, cu precizarea probabilității apariției.



# Modelul pentru spitale

- Antrenat pe date din 5 orașe.
- Input: date meteorologice, oraș, zi și lună
- Output: numărul de pacienți admisi la urgențe în ziua în cauză

# Modelul pentru individ

- Date de antrenare: pacienți din Cluj-Napoca și localități limitrofe.
- Input: date meteorologice, vârstă, sex, comorbidități
- Output: probabilitatea de a dezvolta în ziua predictiei una din:

Insuficiență  
cardio-  
vasculară

Insuficiență  
respiratorie

Atac  
cerebral

# Rezultate

## Modelul pentru spitale:

Metrică	Valoare
Eroare antrenare	13.44
Eroare test	14.99
<b>Eroare rap. la medie</b>	<b>11.19%</b>

# Rezultate

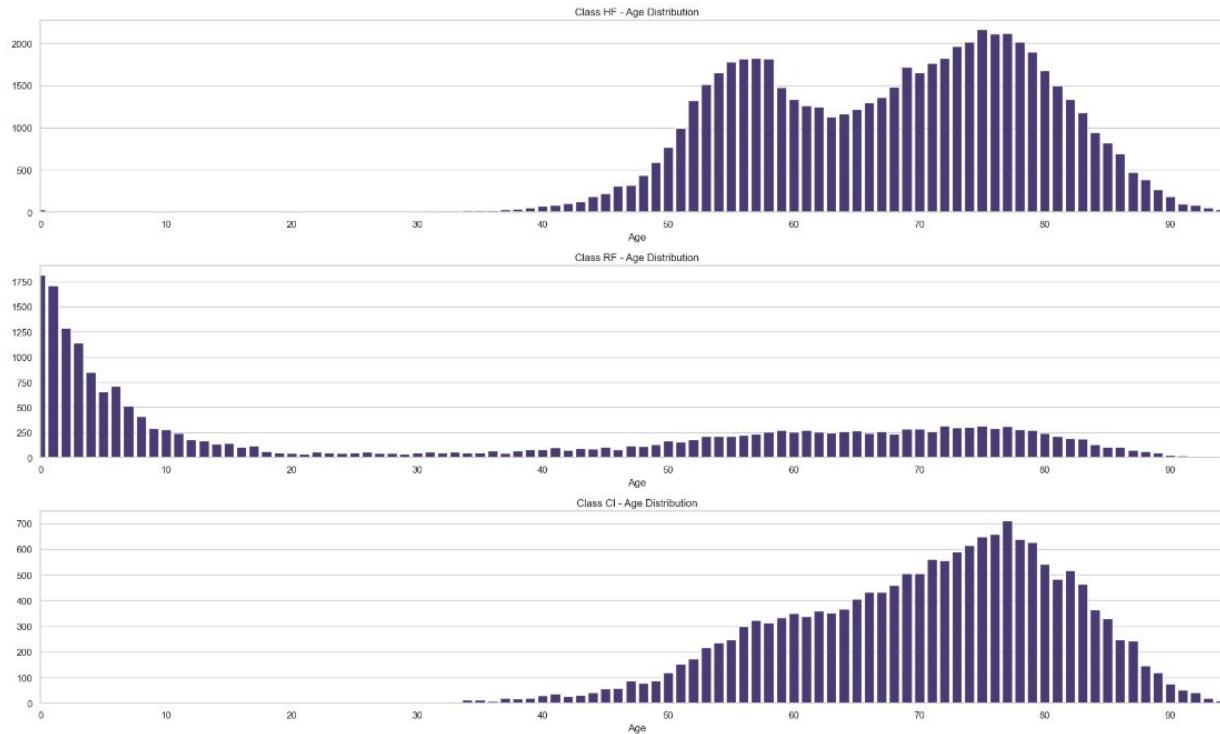
**Modelul pentru utilizatorul de rând:**

Clasă	Sensibilitate (Recall)
Infarct miocardic	0.90
Insuf, respiratorie	0.64
Atac cerebral	0.88
<b>Medie</b>	<b>0.81</b>

# Rezultate

DATASET

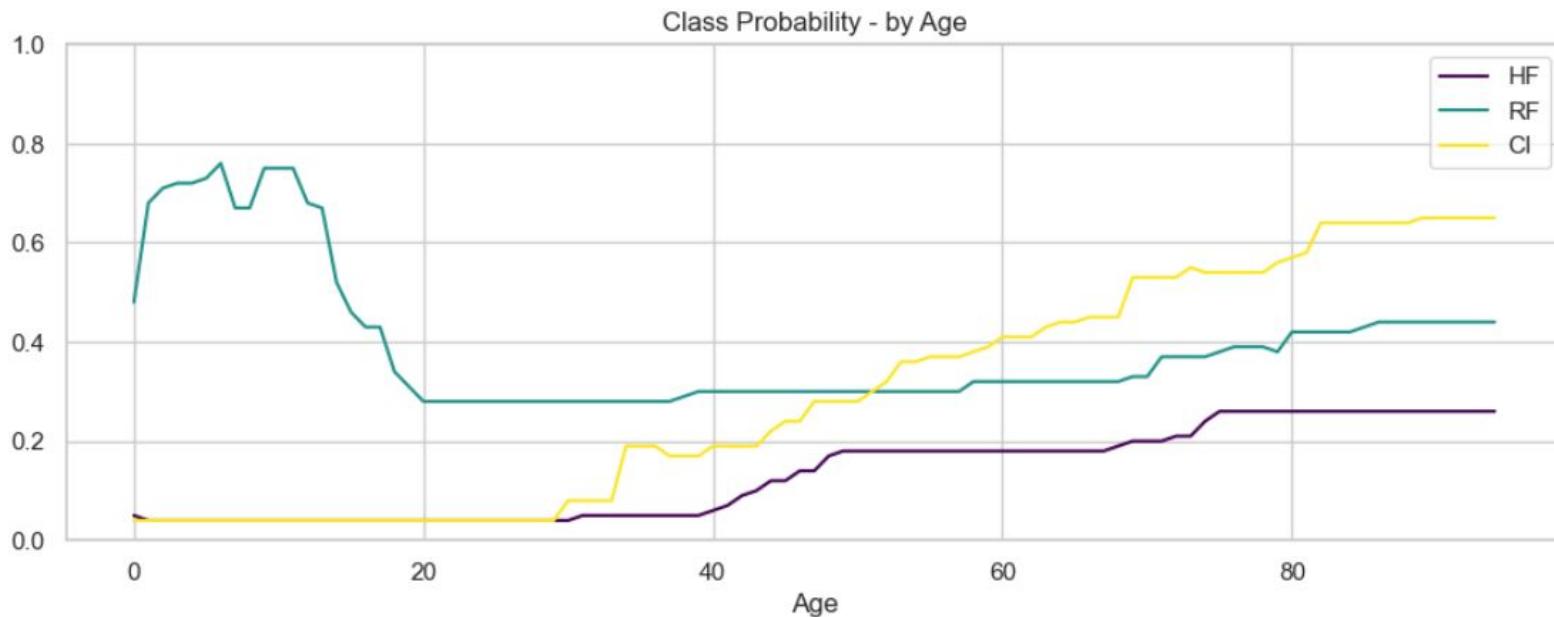
## Modelul pentru utilizatorul de rând:



# Rezultate

MODEL

Modelul pentru utilizatorul de rând:



# Tehnologii folosite



firebase



swift



java



nodeJS



Microsoft fabric



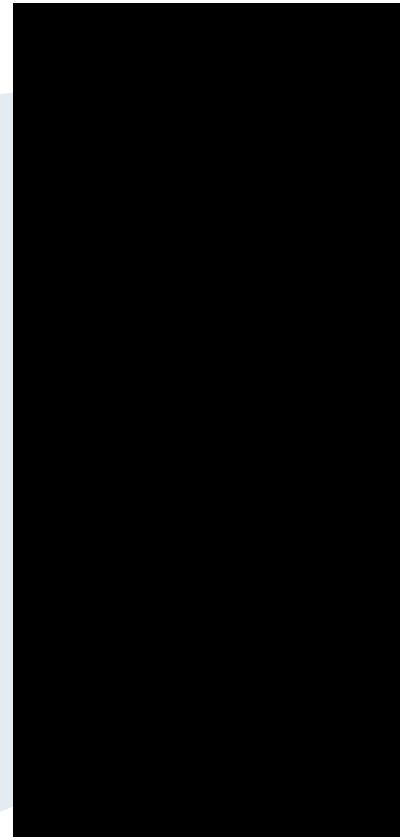
python



flask



## 05. Demo





## Monitorizarea fluxului de pacienti cu Medio:

Bun venit !

00:00:00

Video Source  
Window - Medio

Video Encoder  
Mp4 (x264 | AAC)

Autentificare

This block contains the main interface of the Medio software. It includes a toolbar with icons for file operations, a timestamp at the top, and sections for 'Video Source' and 'Video Encoder'. The 'Video Source' section shows 'Window - Medio' is selected. The 'Video Encoder' section shows 'Mp4 (x264 | AAC)' is selected. To the right, there are two rounded rectangular buttons for 'Autentificare' (Authentication) and a large blue button for 'Autentificare'.

06.

# Q&A



Multumim!