


An underwater photograph of a woman with long, light brown hair swimming over a vibrant coral reef. She is wearing a dark swimsuit and is positioned in the upper left, reaching out with her right arm. The water is clear blue, and the reef below is covered in various green and brown corals. The title text is overlaid on the right side of the image.

# Fighting Environmental Crimes

Aneesa, Iris, Rafael, Xiaoheng





“One of the first conditions of  
happiness is that the link between  
man and nature shall not be  
broken.”

—Leo Tolstoy

A background image showing three people in a hazy, smoggy environment. In the foreground, a woman with dark hair is covering her mouth with her hands, appearing distressed. Behind her, a man with glasses is also visible, and to the left, another woman is looking down. The overall atmosphere is one of environmental pollution and its impact on human health.

How many deaths due to environmental  
pollution every year?

Economie

# Milieuvervuiling kost 4,6 biljoen per jaar en eist 9 miljoen levens

20 oktober 2017 15:12

Aangepast: 20 oktober 2017 15:27

# How many Dutch chemical companies violate safety regulations?

## 9 op de 10 chemische bedrijven overtreden de veiligheidsregels

21-02-2020

Dat concluderen criminologe Marieke Kluin en collega's in het recent verschenen onderzoek 'Regelovertreding en incidenten bij Brzo-bedrijven: een longitudinale benadering' waarbij de inspectierapporten van 494 van deze bedrijven onder de loep zijn genomen. Een klein aantal overtreders (7%) blijkt verantwoordelijk voor een kwart van de overtredingen.



What does this mean for the environment?

CHEMISCH AFVAL WEGGESLUID IN STOOKOLIE

Jolijn Mes / donderdag 28 september 2017, 17:27

# Shell aangeklaagd voor

## explc

NOS NIEUWS • BINNENLAND • 24-06-2018, 16:03 • AANGEPAST 24-06-2018, 20:12

## giftig 'Tanker die ernstige

Rechtszaak

# Amsterdams steenbedrijforzaakte had krijgt fikse boete voor

## dump NAM betaalt boete van 125.000 euro vanwege onvoldoende maatregelen om lekkages te voorkomen

Nieuwsbericht | 09-09-2020 | 14:01

An underwater scene featuring a large school of fish. In the center, a large, dark-colored fish, possibly a tilapia, is swimming towards the right. Below it, two white fish are visible. The background is filled with numerous smaller, dark-colored fish swimming in various directions. The water has a light blue, slightly hazy appearance. The text "Let's Unmask Environmental Crimes Together!" is overlaid in a bold, orange font, centered horizontally and partially covering the central fish. A vertical orange line is positioned on the right side of the image.

Let's Unmask  
Environmental Crimes  
Together!

# Who are they?

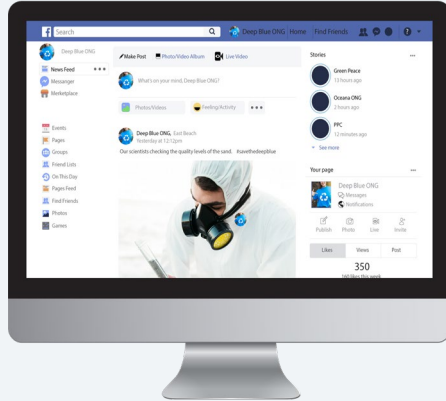


# We don't know what can we do about the suspicious activities around us...

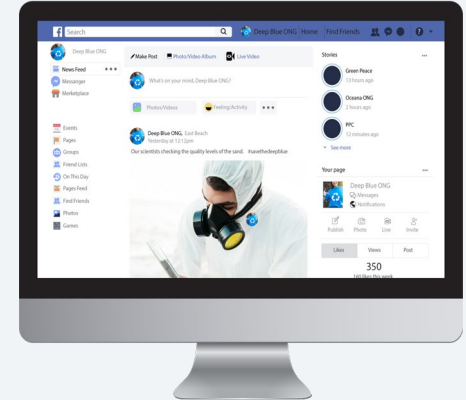
Call the  
police



Social  
Media



Put an online  
complaint

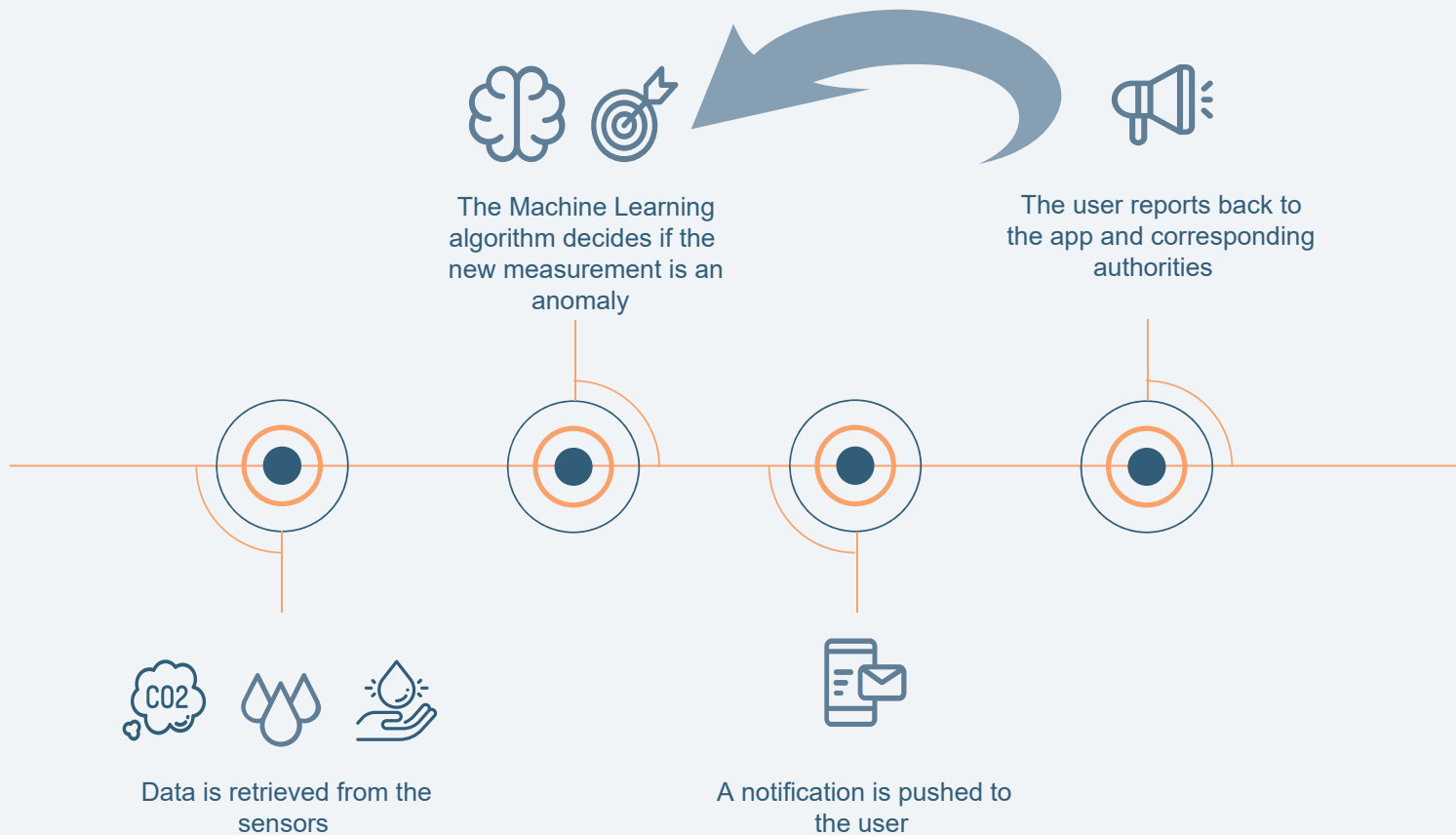




Milieuegyis  
different!

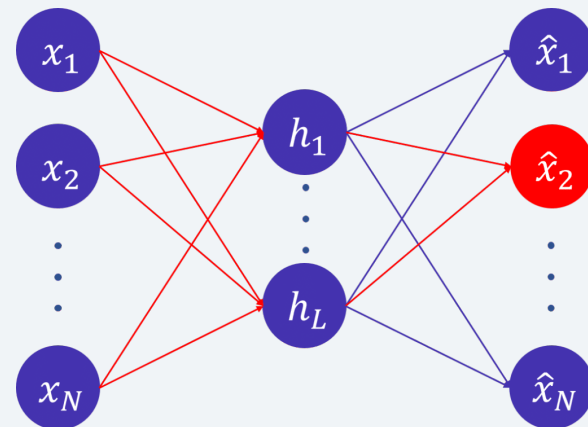
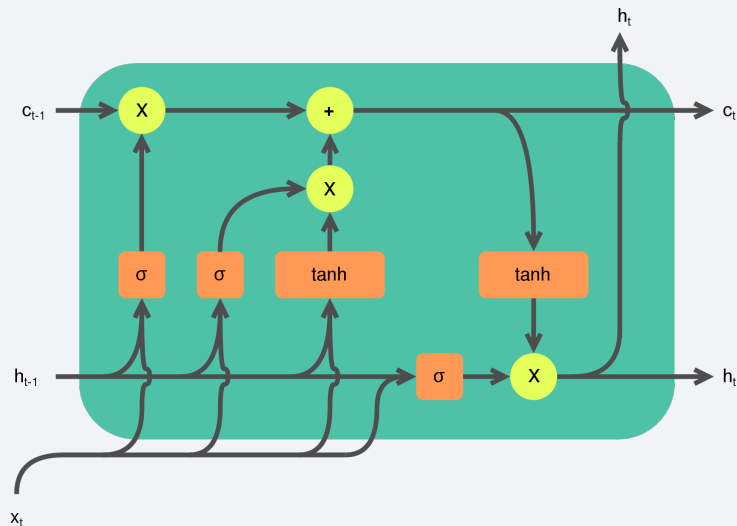


## Data Flow



## Time Series Anomaly Detection with LSTM Autoencoder

Algorithm



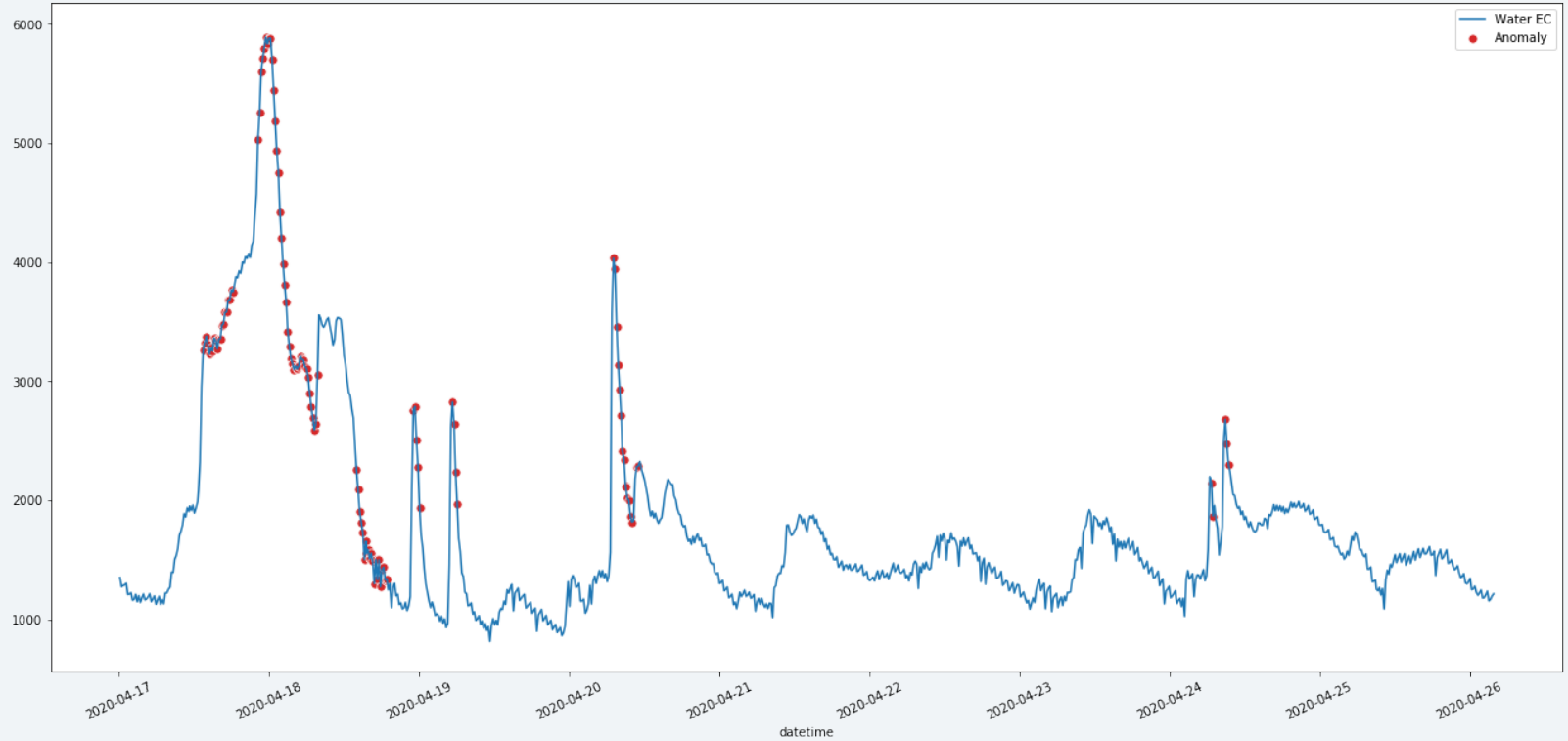
[https://en.wikipedia.org/wiki/Long\\_short-term\\_memory](https://en.wikipedia.org/wiki/Long_short-term_memory)

<https://www.incubegroup.com/blog/autoencoder-anomaly-detection/>

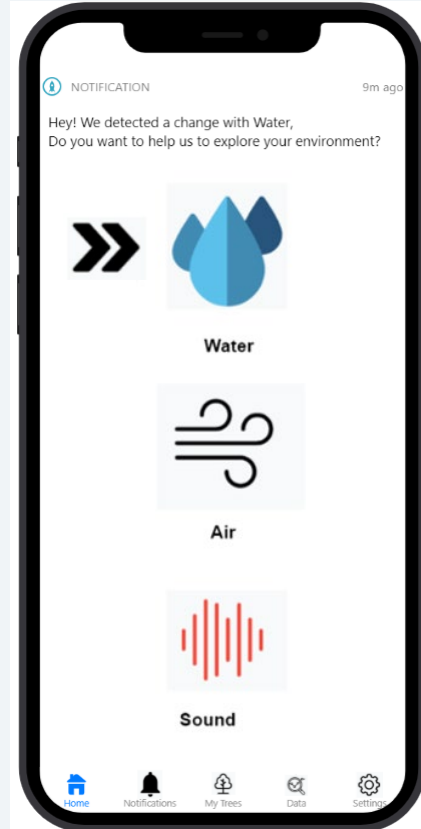


## Time Series Anomaly Detection with LSTM AutoencoderWater Electroconductivity

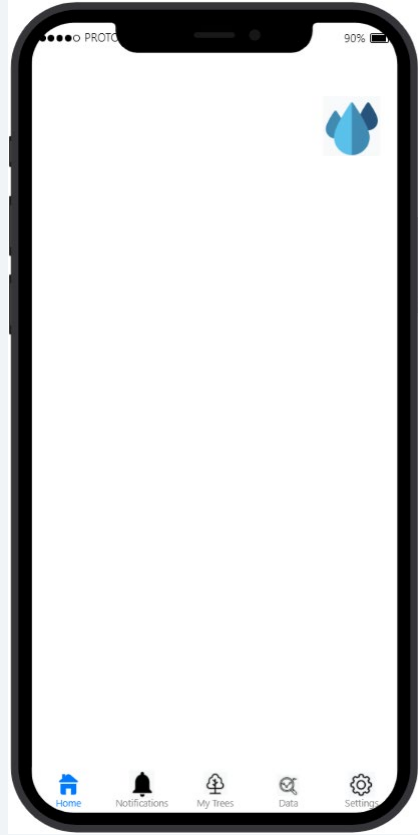
Algorithm



## Our Solution

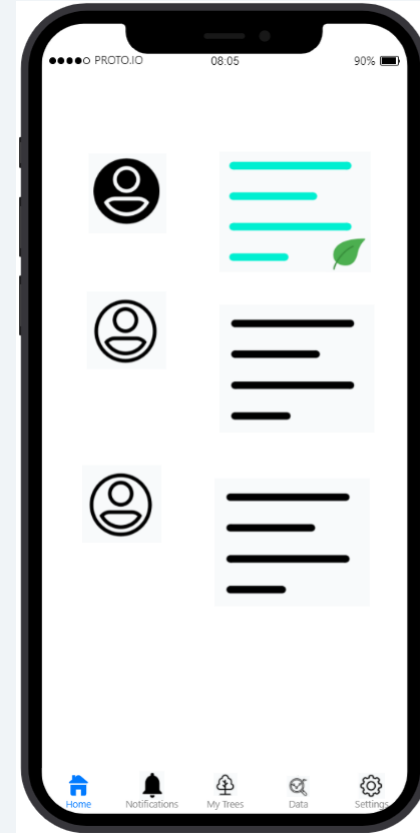
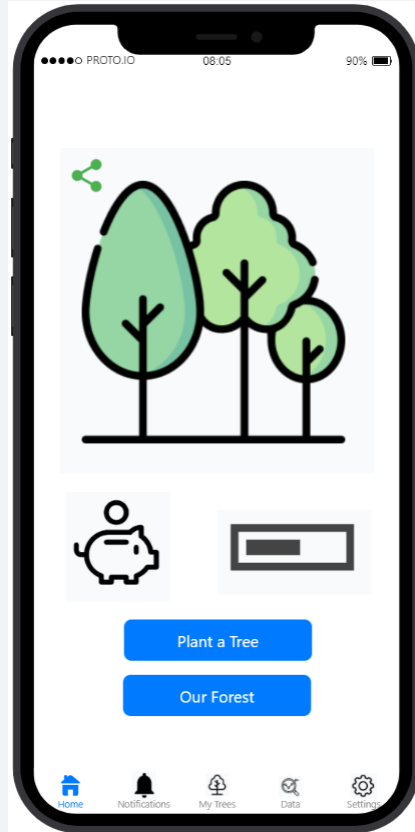


## Our Solution





## Our Solution



A person with long, dark, wavy hair is seen from behind, looking out at a vast body of water under a clear sky. The person is wearing a dark blue or grey long-sleeved shirt. The water is a deep blue-grey color with gentle ripples. The horizon line is visible in the distance. The overall mood is contemplative and serene.

**Your  
contribution  
matters!**