

AI FOR TURTLES

Challenge Final Presentation





Turtle identification



AI for turtles



Future plan

Identification

- Physical tags. Tag loss/malfunction, invasive, legislation.
- Face-id, time consuming.
- No machine learning until now.



Ai for turtles

10

weeks of
hard work

3

working
groups

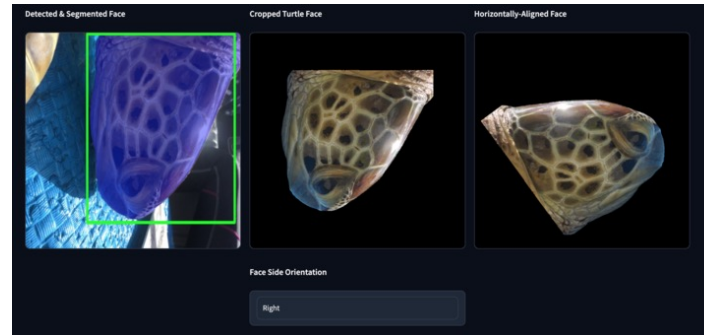
21

AI for Good
engineers

1600+

hours of
engineering work

- FruitpunchAi, Ai for good.
- 3 teams, detection, recognition, application.
- Not to replace tagging.
- Tag loss.
- Data cleaning.



Yolov6



LightGlue

Turtle 1



- What do we have so far?



My Drive > AI_for_Turtles ▾



Type ▾ People ▾ Modified ▾

Name ▾	Owner	Last modified ▾	File size	⋮
📁 results	 me	Feb 6, 2024	—	⋮
📁 resources	 me	Feb 6, 2024	—	⋮
📁 predict	 me	Feb 6, 2024	—	⋮
📁 Data	 me	Feb 5, 2024	—	⋮
📁 backup	 me	Feb 6, 2024	—	⋮
📄 Turtle-identification.ipynb	 me	12:29 PM	60 KB	⋮

• What do we have so far?

The screenshot shows a Jupyter Notebook titled "Turtle-identification.ipynb" with a star icon. The top menu bar includes "File", "Edit", "View", "Insert", "Runtime", "Tools", and "Help", with a status indicator "All changes saved". On the right, there are icons for "Comment", "Share", a settings gear, and a "Colab AI" logo. Below the menu, the notebook interface shows a left sidebar with icons for home, search, code, and output. The main area is titled "Instructions" and contains a numbered list:

1. Insert the images of turtles you want to identify into the [Predict folder](#)
2. Make sure this notebook is connected to the GPU
 - a) Check the top right corner. If next to the it says "T4" or "Connect GPU" you are good to go
 - b) If it says nothing, or anything other than T4 or GPU, you need to click the small arrow (▼) and select "Change runtime type". Then in the pop-up menu you can select T4 GPU and save.
3. Now click on the play button next to the text "23 cells hidden" to start the code
4. A pop-up will show saying you need to connect to drive - accept
5. Once the "23 cells" are executed you can run the next line that says "predict_folder()"

Results should show after 2 minutes.

> Turtle Re-Identification Application

[] 25 cells hidden

<> > Turtle Re-Identification Results

The interface also shows a status bar at the top right indicating "T4" runtime, "RAM" and "Disk" usage, and a "Colab AI" button. A toolbar at the bottom right of the code cell contains icons for undo, redo, copy, paste, and other actions.

• What do we have now?

Input Image: 23-203L.jpg
Is new: False (0.04)



19-048 L
Conf: 0.15



16-146 L
Conf: 0.05



10-122 L
Conf: 0.04



18-056 L
Conf: 0.03



22-085 L
Conf: 0.03



Input Image: 23-203R.jpg
Is new: False (0.06)



19-048 R
Conf: 0.13



19-025 R
Conf: 0.06



08-099 R
Conf: 0.04



07-096 R
Conf: 0.04

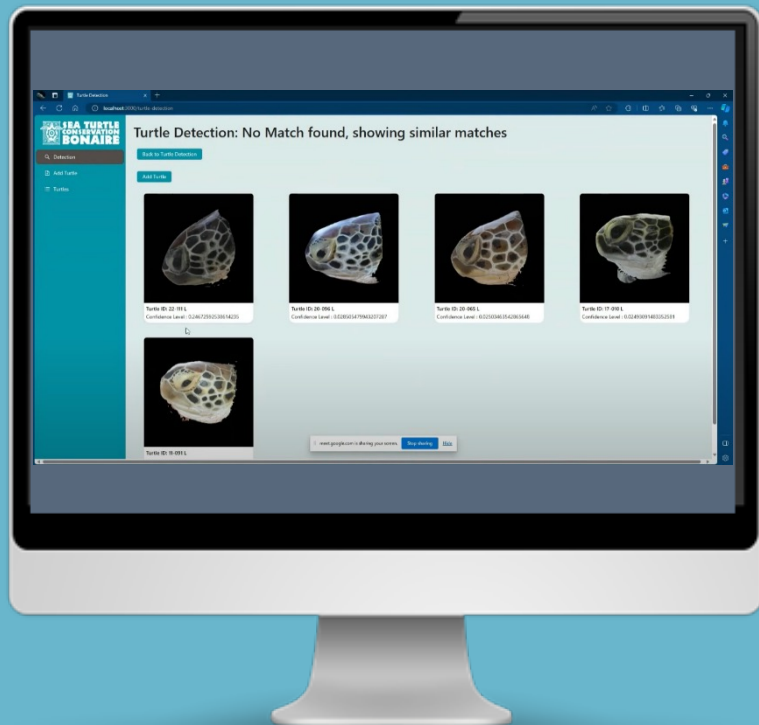


22-108 R
Conf: 0.04



Future plan

Sea Turtle Field App



- Full application available for everybody.
- Self-learning incorporated.
- Underwater detection.

Future plans

SEA TURTLE CONSERVATION BONAIRE

Turtle Detection: No Match found, showing similar matches

Back to Turtle Detection

Add Turtle

Turtle ID: 22-111 L
Confidence Level : 0.24672592538614235

Turtle ID: 17-010 L
Confidence Level : 0.02493091483352581

Turtle ID: 11-091 L
Confidence Level : 0.02417232349045128

Turtle Details

Turtle ID: ID number

New / Recap: [New/ Recap]

SCLn-t left [cm]: [SCLn-t left]

SCLn-t right [cm]: [SCLn-t right]

SCL max.: [SCL max.]

SCLn-t max.: [SCLn-t max.]

Tail [cm]: [Tail]

Apparent sex: [Apparent sex]

OCCL left: [OCCL left]

OCCL right: [OCCL right]

Weight [kg]: [Weight]

Observation FP: [Observation FP]

Tag left: [Tag left]

Tag right: [Tag right]

Cancel

meet.google.com is sharing your screen. Stop sharing Hide



Turtles

Download

Add Turtle

input search text

- Detection
- Add Turtle
- Turtles



Turtle ID: ID number
[Turtle Name]



Turtle ID: ID number
[Turtle Name]



Turtle ID: ID number
[Turtle Name]



Turtle ID: ID number
[Turtle Name]



Turtle ID: ID number
[Turtle Name]



Turtle ID: ID number
[Turtle Name]



Turtle ID: ID number
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Turtle ID: ID number
[Turtle Name]



Turtle ID: ID number
[Turtle Name]

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