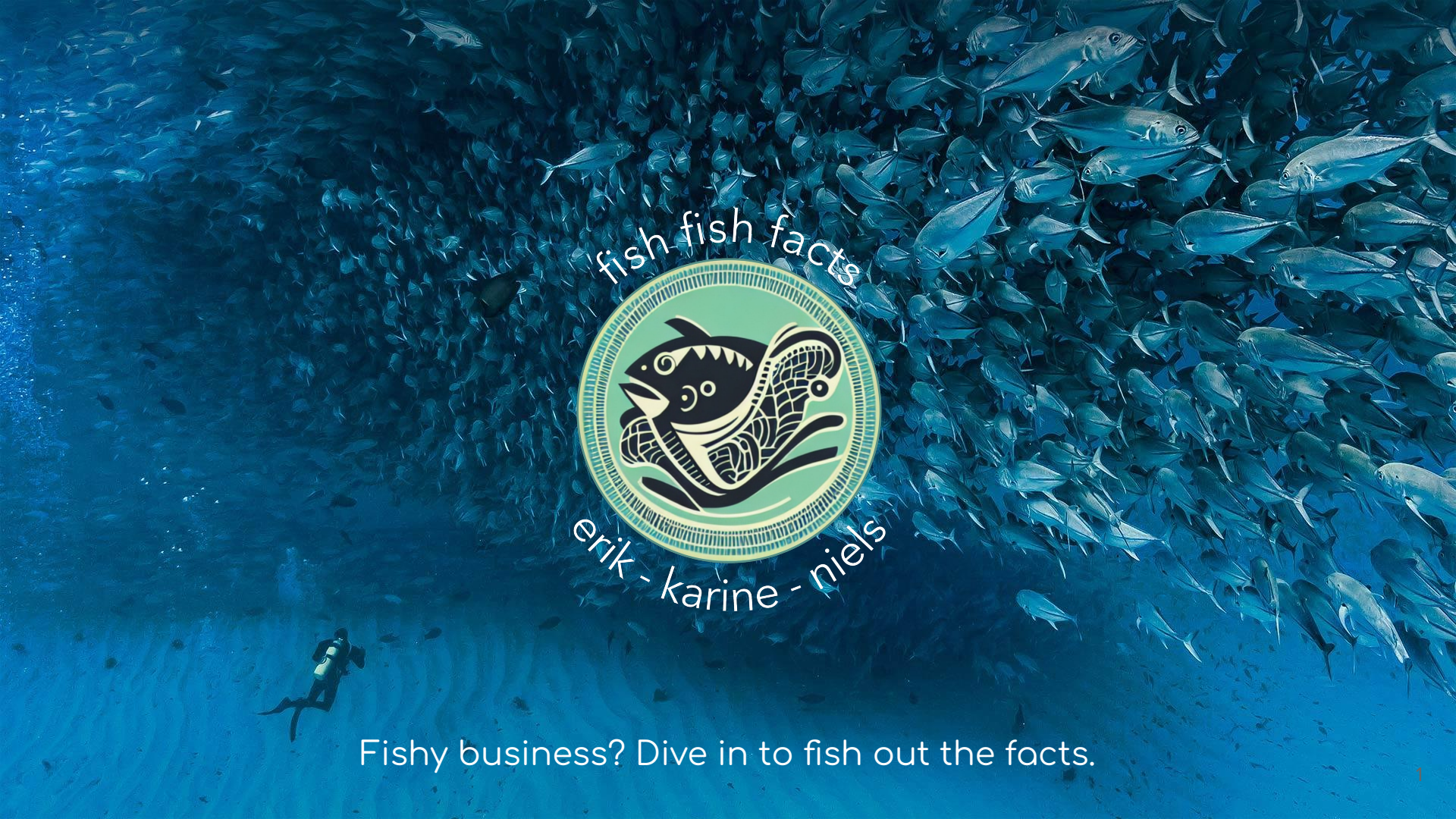
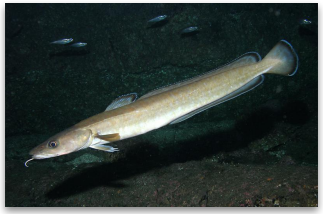


Fishy business? Dive in to fish out the facts.

About us

Erik Gebel

Favourite fish:
Molva molva



Karine Real

Favourite fish:
Acanthaluteres browni

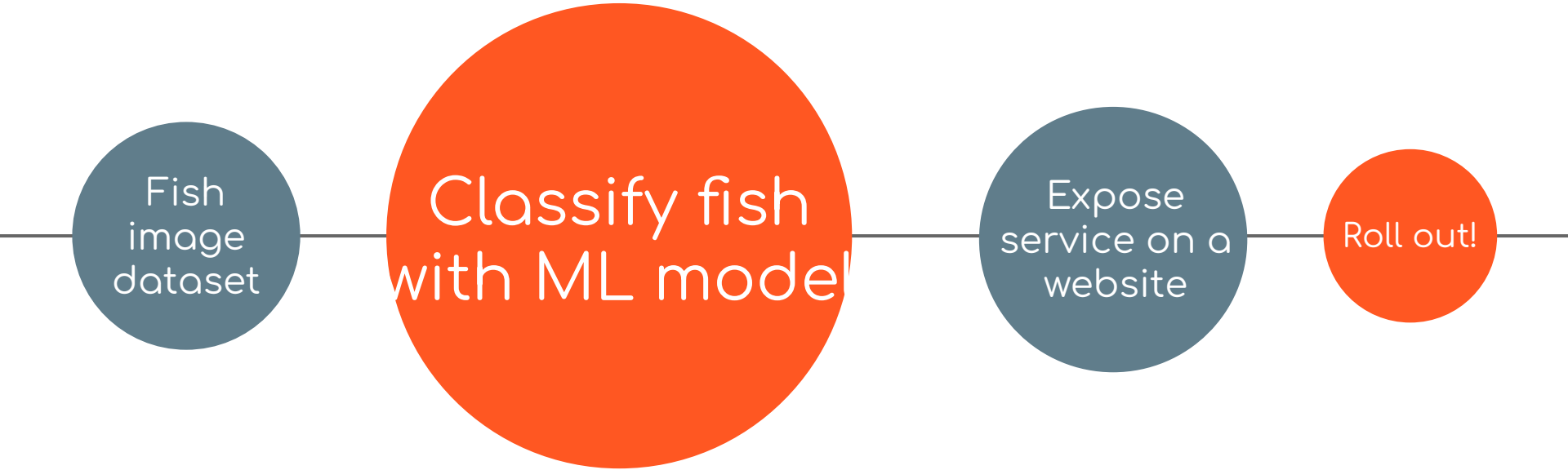
Niels Lory

Favourite fish:
Rhincodon typus

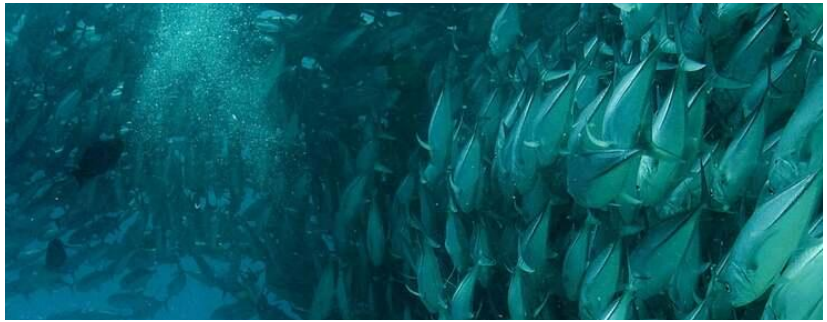
Outline

1. Trust the process
2. All about the data
3. The chosen model
4. Product design
5. Error analysis
6. Outlook

Trust the process



All about the data



kaggle dataset

- Dataset with Approx. ~4000 Images from 468 species of fish found in the indo-pacific (Sripaad Srinivasan - Owner).
- Publication: Anantharajah, K. et al. (2014)

fish fish facts!

- Build an image classification model (ModelMaker CNN Model)
- Collect fish facts
- Combine the two in a website

All about the data

Genus vs. Species

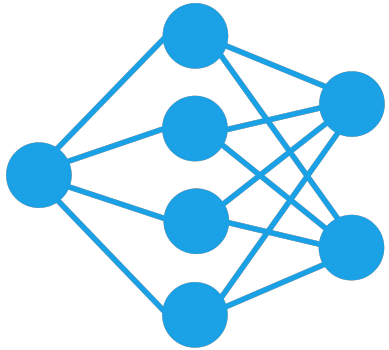
- Genus: A taxonomic category ranking below the family and above the species, designating a group of species
- Species: A group of closely related organisms
- For example, *Acreichthys tomentosus* (one of the fishes in our data)
    - *Acreichthys* is the genus name
    - *tomentosus* is the specific name

Kingdom:	Animalia
Phylum:	Chordata
Class:	Actinopterygii
Order:	Tetraodontiformes
Family:	Monacanthidae
Genus:	Acreichthys
Species:	***A. tomentosus***

The chosen model

The Model

- A CNN model built with the ModelMaker library (part of TensorFlow Lite)
- Utilizes transfer learning based on the EfficientNet-Lite0 pretrained model



Why did we choose it?

- Achieved the best results with the limited data
- User friendly
- Easy to adjust

Accuracy of the two models

60% accuracy predicting the genus (193 classes)

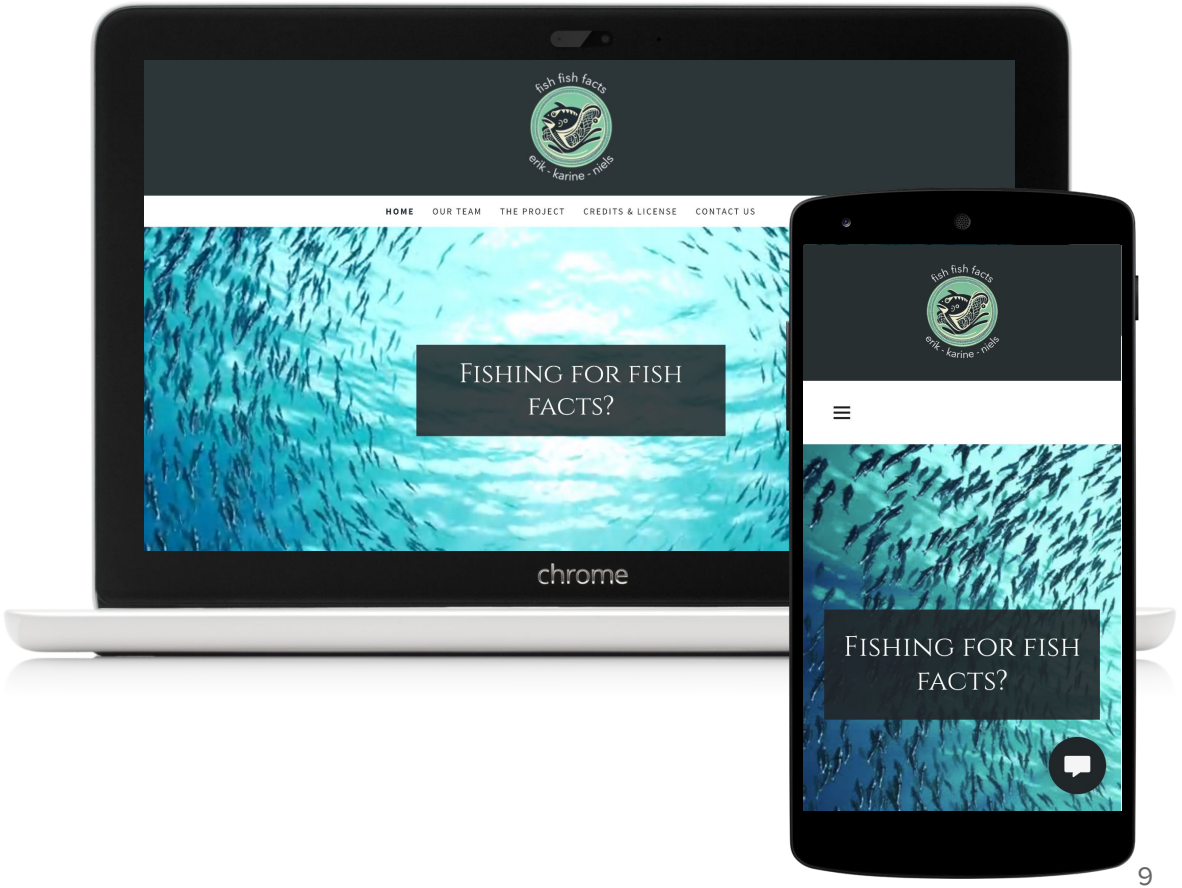
40% accuracy predicting species (483 classes)

Product design
A conservation project

fish fish facts

Dive in to fish out the facts!

A classification model for your holiday snapshots or your greatest catch.



fish fish facts

erik - karine - niels

HOME OUR TEAM THE PROJECT CREDITS & LICENSE CONTACT US

Fishing for fish facts?

For fish facts, upload your fish image in here!

Drag and drop file here

Limit 200MB per file • PNG, JPG

Browse files

FISHPEDIA

Marlins are gourmet fish, that's why they developed long noses.

About us

Our Team

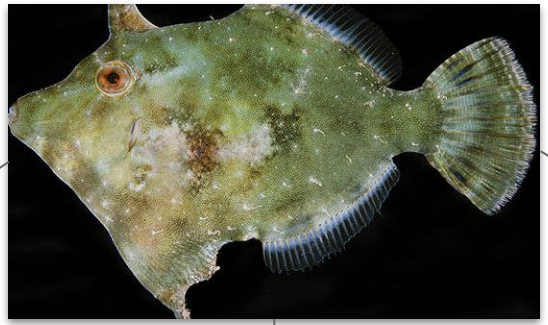
The Project

Credits & License

Time to check out the product

Error analysis

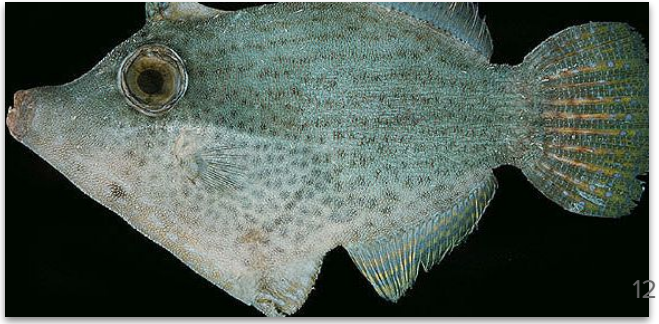
Input image: *Acreichthys tomentosus*



1st prediction:
Paramonacanthus choirocephalus

2nd prediction:
Acreichthys tomentosus

3rd prediction:
Pervagor nigrolineatus



Outlook

1. Collect species data of uploads
   - Prompt that asks whether we can use the picture
   - Location/time/type of “fishing“

2. Make data available
   - to conservational organizations & scientists

3. Monetization via donations
   - “Donate what you like to help us on our conservation mission.“

Thanks from our Team

Erik Gebel

Master of Education

LINKEDIN ERIK-GEBEL

GITHUB EDIERIK

Karine Real

M.Sc. Neurobiology

B.Sc. Pharmacy

LINKEDIN KAQREAL

GITHUB KAQREAL

Niels Lory

Molecular Biologist, Dr. rer. nat.

LINKEDIN NIELS-CHRISTIAN-LORY

GITHUB NIELS-LORY