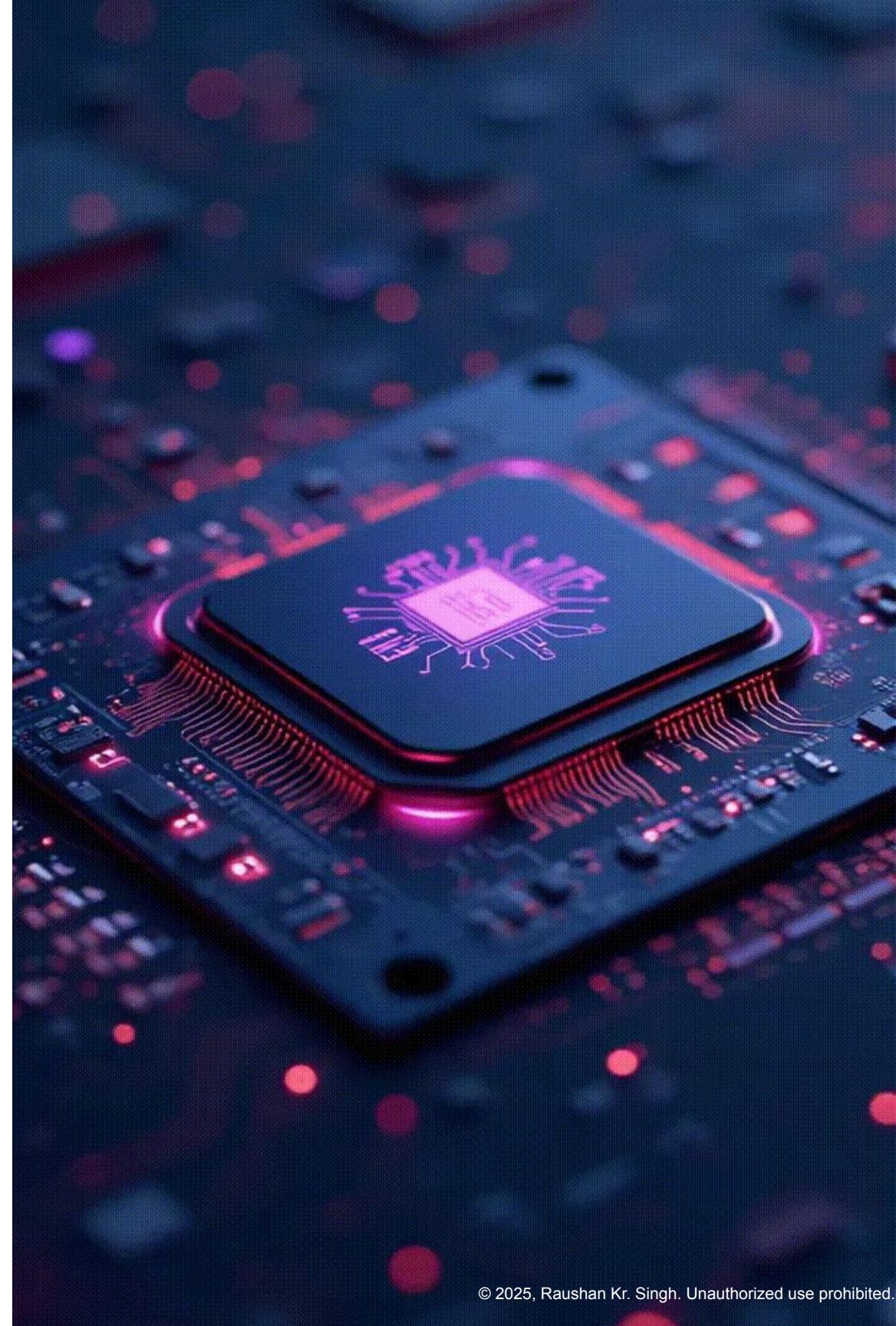


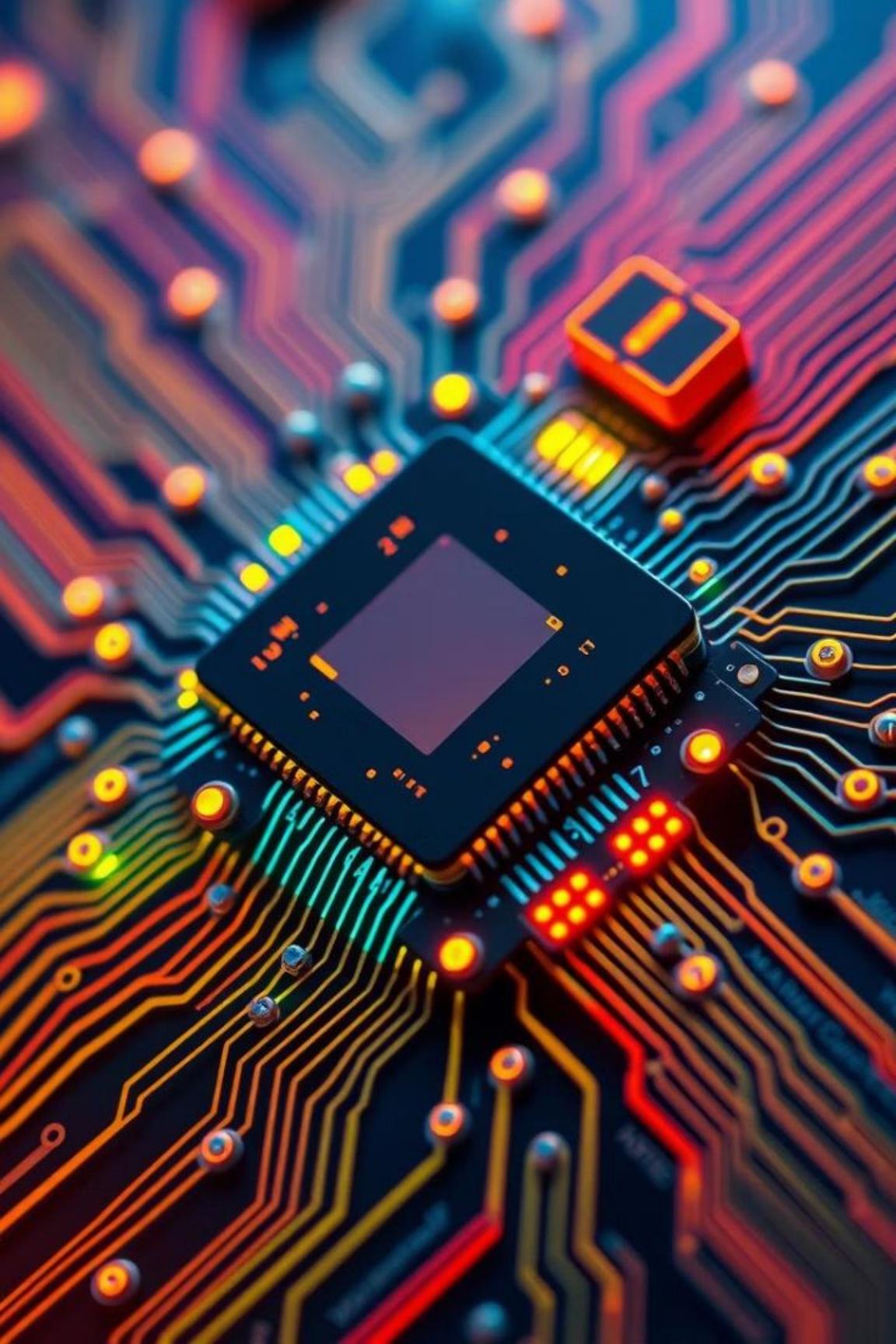
TinyML : Edge AI Bootcamp: Building Intelligent IoT with TinyML- PART 1

Raushan Kr. Singh
CEO, Fulectronix Technologies
IIT Ropar



Edge Impulse: Powering TinyML at the Edge

Build, train, and deploy machine learning
models directly on edge devices





Edge Impulse: The Edge AI Platform



End-to-End Development

From data collection to model deployment, Edge Impulse offers a complete development pipeline.



Device Compatibility

It targets microcontrollers, sensors, and other edge devices, with over 40 sensor integrations.



Real-World Applications

The platform powers diverse applications like predictive maintenance and human sensing.

Why Use Edge Impulse?

Edge Impulse simplifies complex machine learning development, making it accessible to a wider range of developers.

Simplified ML Development

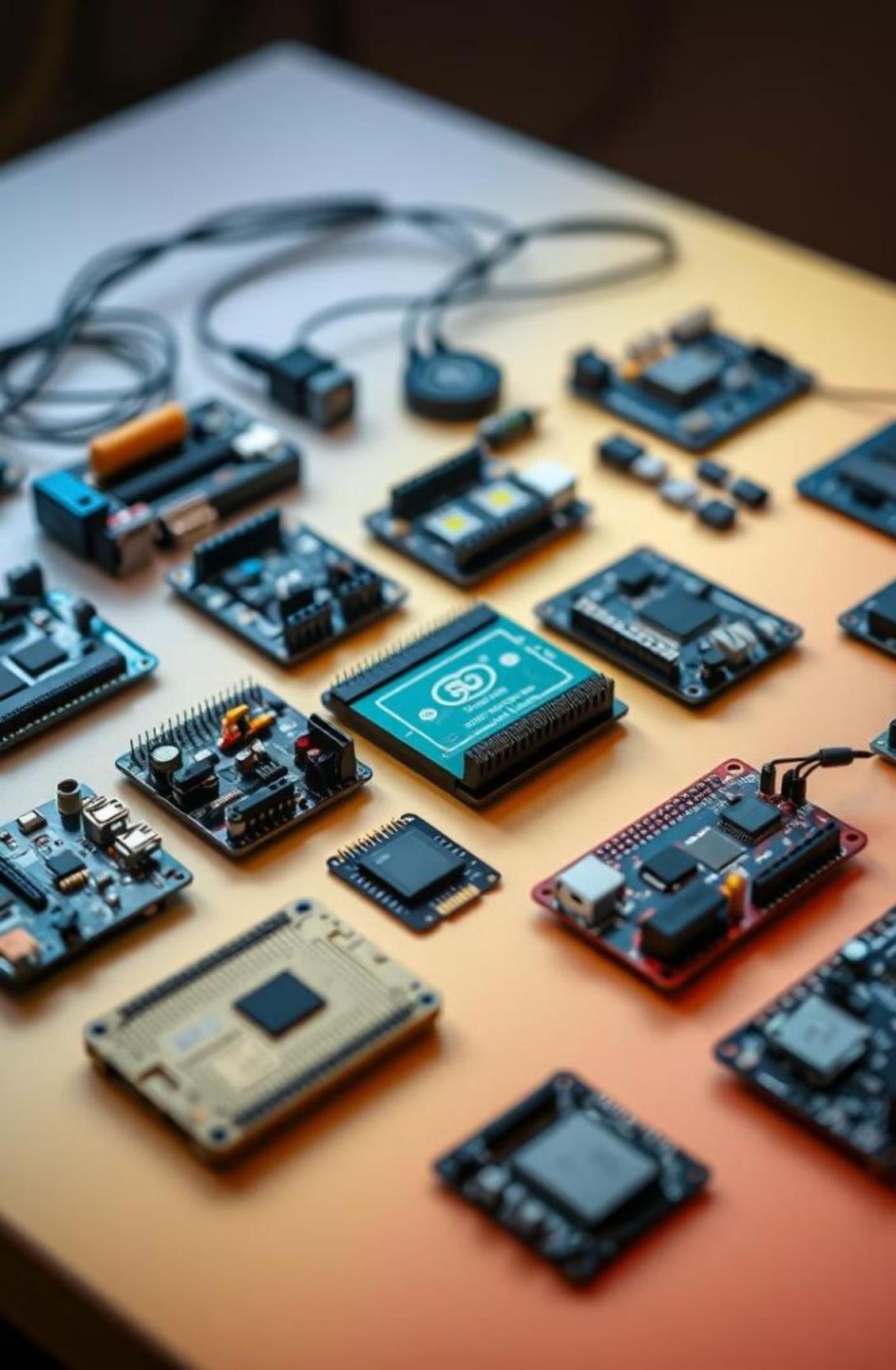
Access powerful no-code/low-code ML tools.

- Visual interface for model building.
- Pre-built machine learning blocks.

Flexible Code Generation

Generate optimized code in Python, C++, and Javascript.

- Supports various programming languages.
- Seamless integration into existing projects.



Edge Impulse Benefits

Edge Impulse offers a range of benefits for efficient and effective edge ML deployment.



Real-time Data

Collect data directly from devices in real time.



Broad Compatibility

Works with Arduino, ESP32, Raspberry Pi, and more.



Optimized Performance

Models are lightweight, fast, and function offline.



Reduced Model Size

Achieve up to an 80% reduction in model size.



Edge Impulse: Streamlined ML Development

Edge Impulse offers specialized tools for each stage of the machine learning development process.

Data Collection

Utilize the integrated data forwarder tool.

Feature Extraction

Access various signal processing blocks.

Model Training

Leverage AutoML, TensorFlow Lite, and CoreML.

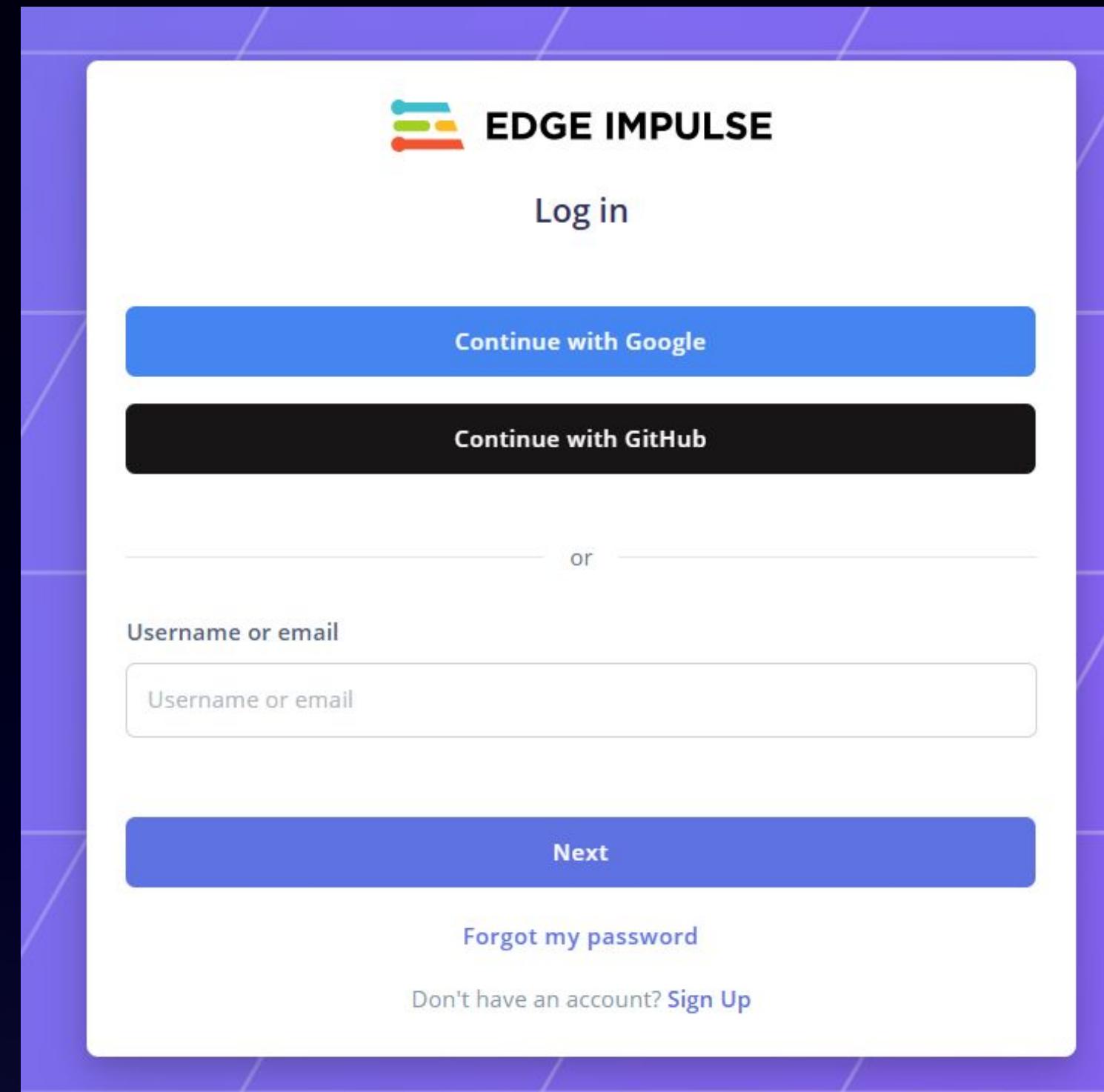
Deployment

One-click deployment to various target devices.



Simulation

Step 1: Create account on Edge Impulse Studio & Login



Step 2: Create a new project

The screenshot shows a user interface for managing projects. On the left, there is a sidebar with the following sections:

- User Profile:** A large blue circle with a white 'R', the name "Raushan", and the title "DEVELOPER".
- Enable MFA:** A message stating "Multi-factor authentication is now available for all users. Set up now." with a "X" button.
- Organizations:** A section for managing shared workspaces.
- Try Enterprise free:** A button to try the enterprise version.

The main area is titled "Projects" and contains the following content:

- A message: "0 of 3 private projects remaining. Want access to more? Try Enterprise free."
- A "Sort" dropdown and a "Create new project" button, which is highlighted with a red border.
- A list of seven projects, each with a blue circular icon containing a white 'R':
 - Raushan / IoT
 - Raushan / TinyML
 - Raushan / Raushan_IoT_Glove_Voice
 - Raushan / IoT Glove GESTURE
 - Raushan / IoT_CLASS
 - Raushan / iot_class_1
 - Raushan / defender_glove_new PUBLIC

Step 3: Enter Project Name and Select Setting

 Create a new project x

Enter the name for your new project:

Choose your project type:

Personal
60 min job limit, 4GB or 4 hours of data, limited collaboration.

Enterprise
No job or data size limits, higher performance, custom blocks.

Choose your project setting:

Public
Anyone on the internet can view and clone this project under the [3-Clause BSD license](#). Only invited users will be able to edit.

Private (0 of 3 remaining)
Only invited users can edit and view your project.
To request additional projects, [contact sales](#)

 Want full-feature access and unlimited projects? [Try Enterprise free.](#)

Create new project

Step 4: Enter Project Name and Select Setting

 Create a new project ×

Enter the name for your new project:

Choose your project type:

Personal
60 min job limit, 4GB or 4 hours of data, limited collaboration.

Enterprise
No job or data size limits, higher performance, custom blocks.

Choose your project setting:

Public
Anyone on the internet can view and clone this project under the [3-Clause BSD license](#). Only invited users will be able to edit.

Private (0 of 3 remaining)
Only invited users can edit and view your project.
To request additional projects, contact sales

 Want full-feature access and unlimited projects? [Try Enterprise free.](#)

Create new project

Step 5: Getting Started

The screenshot shows the Edge Impulse Studio interface for a project titled "TinyML and IoT". The left sidebar, highlighted with a red border, contains navigation links for Dashboard, Devices, Data acquisition, Experiments, EON Tuner, Impulse design (with sub-options Create impulse, Retrain model, Live classification, Model testing, Deployment, and Versioning), and an Upgrade Plan section. The main content area displays the "TinyML and IoT" project details, including tabs for Project info, Keys, Export, and Jobs. The Project info tab shows the title "TinyML and IoT" and a sub-section "Getting started" with options to Add existing data, Collect new data, and Upload your model. Below this, there's a "Start with a tutorial" section featuring three cards: Motion: Gesture recognition, Images: Object detection, and Audio: Audio classification. The right side of the screen includes sections for Sharing (set to Public), Published versions (0), and Collaborators (1/4), where the user "Raushan" is listed as the owner.

Project info Keys Export Jobs

Raushan / TinyML and IoT PERSONAL

Target: Cortex-M4F 80MHz

EDGE IMPULSE

Dashboard

Devices

Data acquisition

Experiments

EON Tuner

Impulse design

- Create impulse
- Retrain model
- Live classification
- Model testing
- Deployment

Versioning

GETTING STARTED

Upgrade Plan

Get access to higher job limits and more collaborators.

View plans

TinyML and IoT

This is your Edge Impulse project. From here you acquire new training data, design impulses and train models.

+ New tag

Getting started

Start building your dataset or validate your model's on-device performance:

- Add existing data
- Collect new data
- Upload your model

Start with a tutorial

Not sure where to start? Follow a tutorial to build your first model in just minutes!

- Motion: Gesture recognition
- Images: Object detection
- Audio: Audio classification

Sharing

Public

Anyone on the internet can view and clone this project under the [3-Clause BSD license](#). Only invited users can edit.

SHARE LINK

<https://studio.edgeimpulse.com/public/712880/live>

Published versions (0)

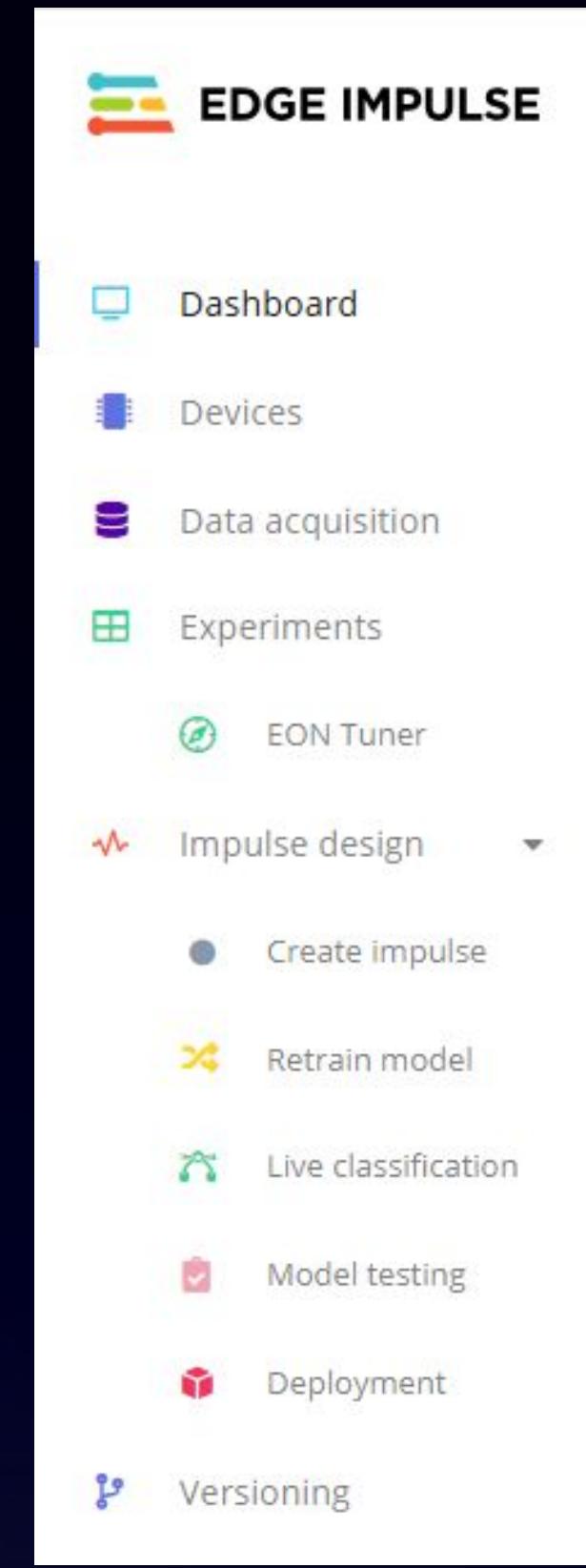
This project has no published versions.

PUBLISH A VERSION

Collaborators (1/4)

Raushan OWNER

Step 6: Getting Started



Step 7: Getting Started

The screenshot shows the Edge Impulse project dashboard for a project named "TinyML and IoT". The left sidebar contains navigation links for Dashboard, Devices, Data acquisition, Experiments, EON Tuner, Impulse design (with sub-options Create impulse, Retrain model, Live classification, Model testing, Deployment), Versioning, and an Upgrade Plan section. The main content area features a "Project info" header with tabs for Keys, Export, and jobs, and a "PERSONAL" status indicator. A "Target: Cortex-M4F 80MHz" and a blue circular "R" icon are also present. The central area displays the "TinyML and IoT" project title and a brief description: "This is your Edge Impulse project. From here you acquire new training data, design impulses and train models." Below this is a "Getting started" section with three options: "Add existing data" (highlighted with a red border), "Collect new data", and "Upload your model". Further down, there's a "Start with a tutorial" section featuring three cards: "Motion: Gesture recognition" (purple background), "Images: Object detection" (teal background), and "Audio: Audio classification" (orange background). The right side of the dashboard includes a "Sharing" section with a "Public" dropdown set to "Public", a note about internet access and license, a "SHARE LINK" button with the URL <https://studio.edgeimpulse.com/public/712880/live>, a "Published versions (0)" section with a "Publish a version of your project" button, and a "Collaborators (1/4)" section showing "Raushan OWNER".

Step 8: Getting Started

The screenshot shows the Edge Impulse Studio interface. On the left, there's a sidebar with navigation links like Dashboard, Devices, Data acquisition, Experiments, EON Tuner, Impulse design (with Create impulse and Retrain model), Live classification, Model testing, Deployment, Versioning, and an Upgrade Plan section. The main area has tabs for Project info, Keys, Export, and Jobs. The title "TinyML and IoT" is displayed, followed by a subtext: "This is your Edge Impulse project. From here you acquire new training data, design impulses and train models." A "New tag" button is present. The "Getting started" section contains three cards: "Add existing data", "Collect new data" (which is highlighted with a red box), and "Upload your model". Below this, a "Start with a tutorial" section offers "Motion: Gesture recognition", "Images: Object detection", and "Audio: Audio classification". The right side features a "Sharing" section with a "Public" dropdown set to "Public", a note about internet visibility, a share link, and a "Published versions (0)" section with a "Publish a version of your project" button. The bottom right shows "Collaborators (1/4)" with one collaborator listed as "Raushan OWNER". The top right shows a target configuration for "Cortex-M4F 80MHz" and a user icon.

Step 9: Getting Started

The screenshot shows the Edge Impulse project dashboard for a project named "TinyML and IoT". The left sidebar contains navigation links for Dashboard, Devices, Data acquisition, Experiments, EON Tuner, Impulse design (with sub-options Create impulse, Retrain model, Live classification, Model testing, Deployment), Versioning, and an Upgrade Plan section. The main content area features a "Getting started" section with three buttons: "Add existing data", "Collect new data", and "Upload your model" (which is highlighted with a red box). Below this is a "Start with a tutorial" section featuring three cards: "Motion: Gesture recognition", "Images: Object detection", and "Audio: Audio classification". The top right shows project details like "Target: Cortex-M4F 80MHz" and a "PERSONAL" badge. The right side includes sections for "Sharing" (Public link: <https://studio.edgeimpulse.com/public/712880/live>) and "Published versions (0)". The bottom right shows the owner "Raushan" (OWNER) and a help icon.

Project info Keys Export jobs

Raushan / TinyML and IoT PERSONAL

Target: Cortex-M4F 80MHz R

TinyML and IoT

This is your Edge Impulse project. From here you acquire new training data, design impulses and train models.

+ New tag

Getting started

Start building your dataset or validate your model's on-device performance:

- Add existing data
- Collect new data
- Upload your model

Start with a tutorial

Not sure where to start? Follow a tutorial to build your first model in just minutes!

- Motion: Gesture recognition
- Images: Object detection
- Audio: Audio classification

Sharing

Public

Anyone on the internet can view and clone this project under the [3-Clause BSD license](#). Only invited users can edit.

SHARE LINK

<https://studio.edgeimpulse.com/public/712880/live>

Published versions (0)

This project has no published versions.

PUBLISH A VERSION

Collaborators (1/4)

R Raushan OWNER

Step 10: Getting Started

The screenshot shows the Edge Impulse project dashboard for a project named "TinyML and IoT". The left sidebar contains navigation links for Dashboard, Devices, Data acquisition, Experiments, EON Tuner, Impulse design (with sub-options Create impulse, Retrain model, Live classification, Model testing, Deployment), Versioning, and an Upgrade Plan section. The main content area features a "Project info" header with tabs for Keys, Export, and jobs, and a "PERSONAL" status indicator. A "Target: Cortex-M4F 80MHz" and a blue circular "R" icon are also present. The central part of the dashboard is titled "TinyML and IoT" and includes a sub-header: "This is your Edge Impulse project. From here you acquire new training data, design impulses and train models." Below this is a "New tag" button. The "Getting started" section provides three initial steps: "Add existing data" (with a database icon), "Collect new data" (with a camera icon), and "Upload your model" (with a gear icon). A "Sharing" panel indicates the project is public, allowing anyone on the internet to view and clone it under a 3-Clause BSD license. It includes a "SHARE LINK" button with the URL <https://studio.edgeimpulse.com/public/712880/live>. The "Published versions (0)" section shows no published versions and has a "Publish a version of your project" button. The "Collaborators (1/4)" section lists "Raushan" as the owner. The bottom right corner features a copyright notice: "© 2025, Raushan Kr. Singh. Unauthorized use prohibited."

Project info Keys Export jobs PERSONAL

Raushan / TinyML and IoT

Target: Cortex-M4F 80MHz

EDGE IMPULSE

Dashboard

Devices

Data acquisition

Experiments

EON Tuner

Impulse design

- Create impulse
- Retrain model
- Live classification
- Model testing
- Deployment

Versioning

GETTING STARTED

Upgrade Plan

Get access to higher job limits and more collaborators.

View plans

TinyML and IoT

This is your Edge Impulse project. From here you acquire new training data, design impulses and train models.

+ New tag

Getting started

Start building your dataset or validate your model's on-device performance:

- Add existing data
- Collect new data
- Upload your model

Sharing

Public

Anyone on the internet can view and clone this project under the [3-Clause BSD license](#). Only invited users can edit.

SHARE LINK

<https://studio.edgeimpulse.com/public/712880/live>

Published versions (0)

This project has no published versions.

Publish a version of your project

Motion: Gesture recognition

Images: Object detection

Audio: Audio classification

Collaborators (1/4)

Raushan OWNER

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Step 11: Getting Started

The screenshot shows the Edge Impulse Studio interface. On the left is a sidebar with navigation links like Dashboard, Devices, Data acquisition, Experiments, EON Tuner, Impulse design (with sub-options Create impulse, Retrain model, Live classification, Model testing, Deployment), Versioning, and an Upgrade Plan section. The main area has tabs for Project info, Keys, Export, and Jobs. The title 'TinyML and IoT' is displayed, followed by a sub-instruction: 'This is your Edge Impulse project. From here you acquire new training data, design impulses and train models.' A 'New tag' button is present. The 'Getting started' section contains three cards: 'Add existing data' (with a database icon), 'Collect new data' (with a camera icon), and 'Upload your model' (with a file icon). Below this is a 'Start with a tutorial' section with three cards: 'Motion: Gesture recognition' (purple background, hand icon), 'Images: Object detection' (teal background, camera icon, highlighted with a red border), and 'Audio: Audio classification' (orange background, speaker icon). The right side features a 'Sharing' section with a 'Public' dropdown set to 'Public', a note about internet visibility, a 'SHARE LINK' button with a URL, and sections for 'Published versions (0)' and 'Collaborators (1/4)' where 'Raushan' is listed as the owner.

Step 12: Getting Started

The screenshot shows the Edge Impulse project dashboard for a project named "TinyML and IoT". The left sidebar includes links for Dashboard, Devices, Data acquisition, Experiments, EON Tuner, Impulse design (with sub-options Create impulse, Retrain model, Live classification, Model testing, Deployment, and Versioning), and an Upgrade Plan section. The main content area features a "Project info" header with tabs for Project info, Keys, Export, and Jobs, and a "PERSONAL" badge. It displays the target as "Cortex-M4F 80MHz" and a user icon labeled "R". The central area has a title "TinyML and IoT" and a sub-instruction: "This is your Edge Impulse project. From here you acquire new training data, design impulses and train models." It includes a "New tag" button and a "Getting started" section with three cards: "Add existing data" (database icon), "Collect new data" (camera icon), and "Upload your model" (arrow icon). Below this is a "Start with a tutorial" section with three cards: "Motion: Gesture recognition" (hand icon), "Images: Object detection" (camera icon), and "Audio: Audio classification" (audio wave icon). The "Audio: Audio classification" card is highlighted with a red border. To the right, there's a "Sharing" section with a "Public" dropdown set to "Public", a note about internet visibility, a "SHARE LINK" button with the URL <https://studio.edgeimpulse.com/public/712880/live>, and sections for "Published versions (0)" and "Collaborators (1/4)". The collaborator listed is "Raushan" (OWNER).

EDGE IMPULSE

Raushan / TinyML and IoT PERSONAL

Target: Cortex-M4F 80MHz R

Project info Keys Export Jobs

TinyML and IoT

This is your Edge Impulse project. From here you acquire new training data, design impulses and train models.

+ New tag

Getting started

Add existing data

Collect new data

Upload your model

Start with a tutorial

Motion: Gesture recognition

Images: Object detection

Audio: Audio classification

Sharing Public

Anyone on the internet can view and clone this project under the [3-Clause BSD license](#). Only invited users can edit.

SHARE LINK

<https://studio.edgeimpulse.com/public/712880/live>

Published versions (0)

This project has no published versions.

Publish a version of your project

Collaborators (1/4)

R Raushan OWNER



Data Collection

Step 13: Collect new data and Scan QR to use Phone

Raushan / TinyML and IoT

Project info Keys Export Jobs

TinyML and IoT

This is your Edge Impulse project. From here you acquire new training data, design impulses and train models.

+ New tag

Getting started

Start building your dataset or validate your model's on-device performance:

Add existing data Collect new data

Start with a tutorial

Not sure where to start? Follow a tutorial to build your first model in just minutes!

Motion: Gesture recognition Images: Object detection

Collect new data

Collect data directly from your phone, computer, device, or development board.

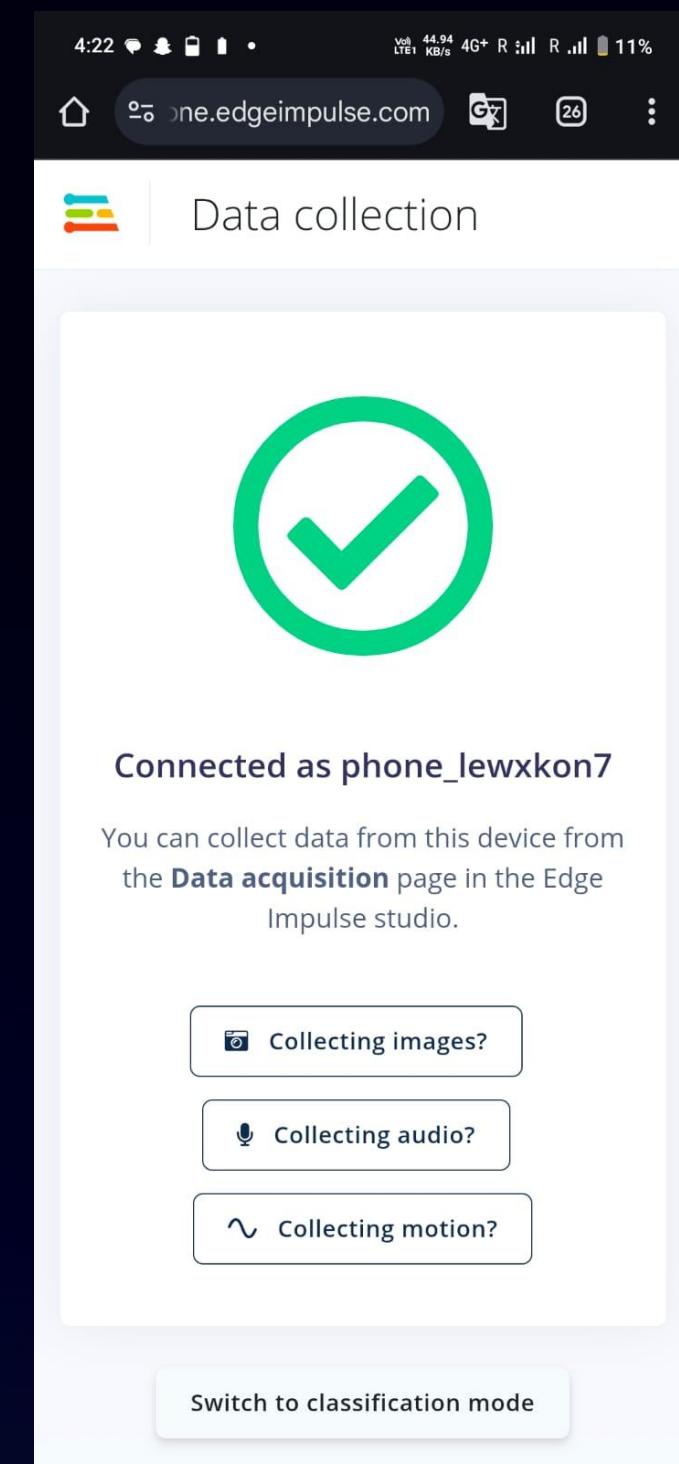
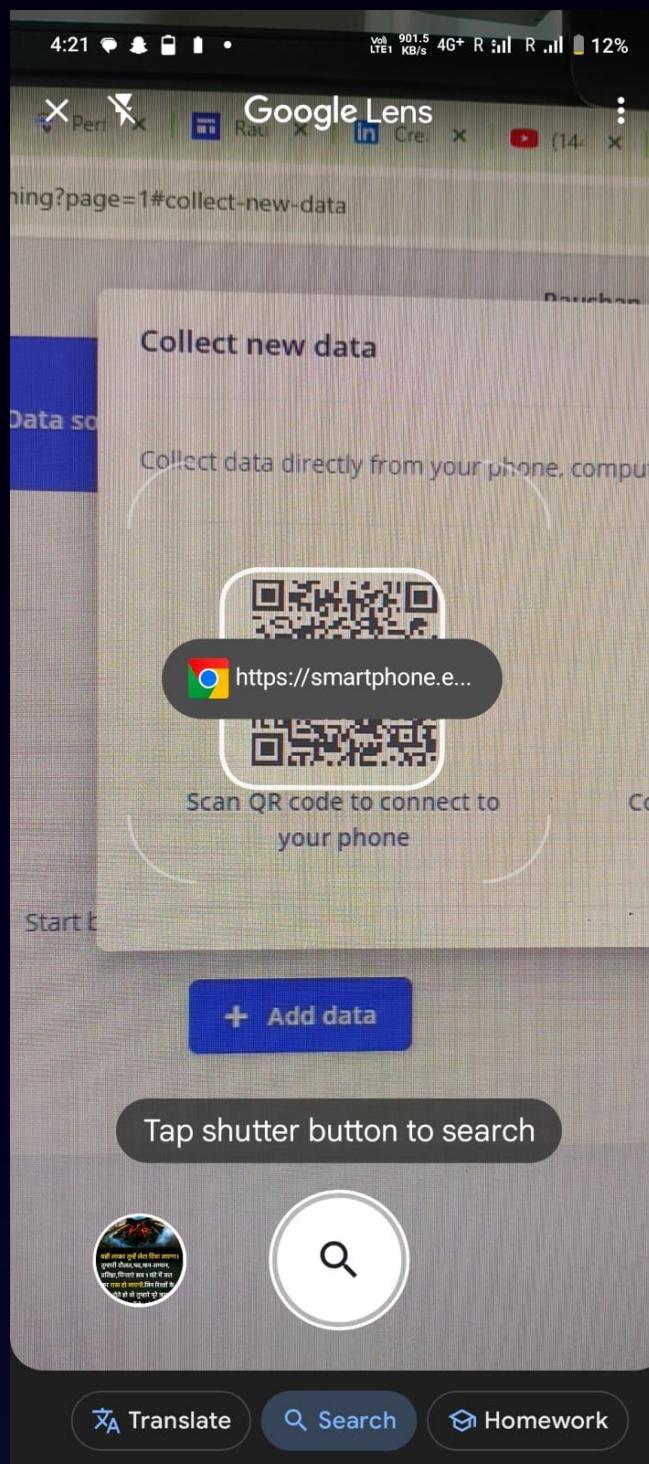
Scan QR code to connect to your phone

Connect to your computer

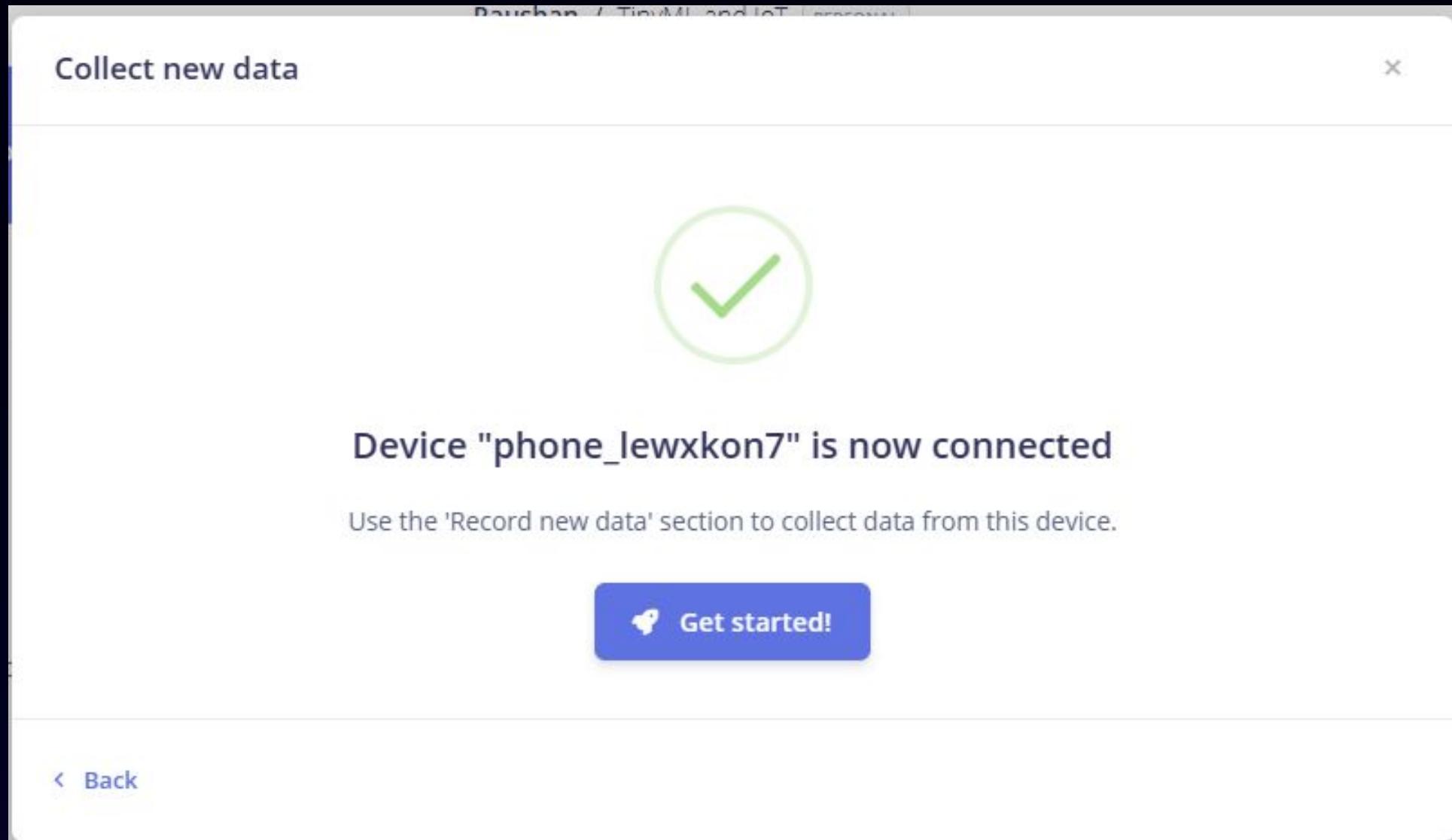
Connect your device or development board

Step 14: Phone Screen: Scan QR in Google Lens and

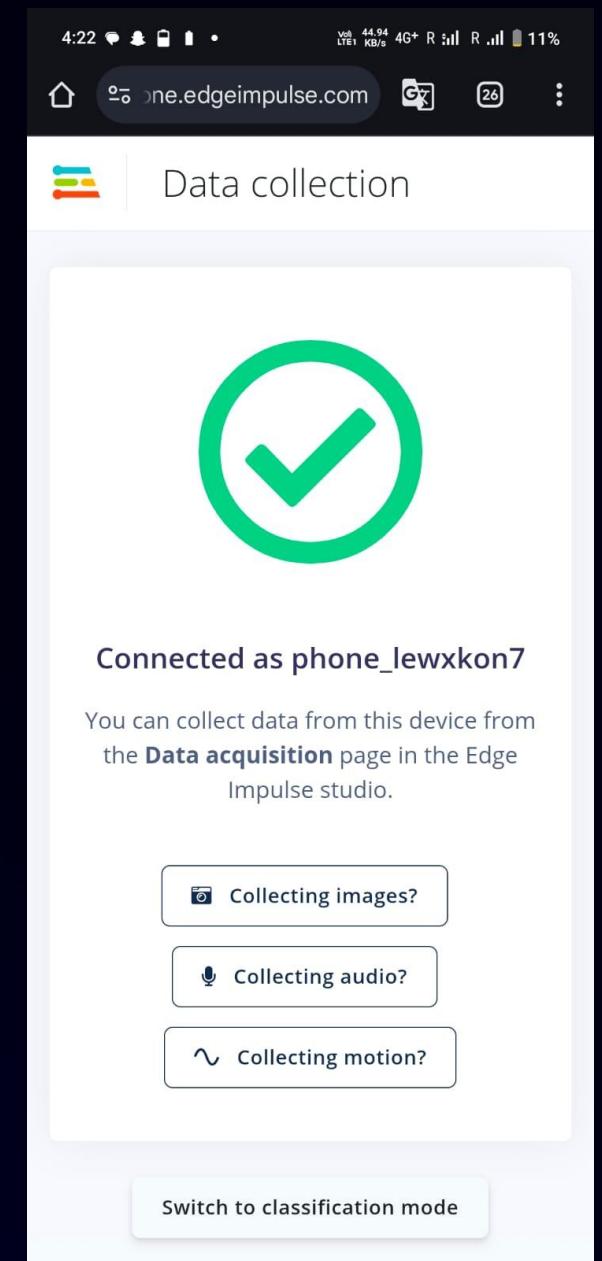
Cont.



Step 15: Create account on Edge Impulse Studio & Login

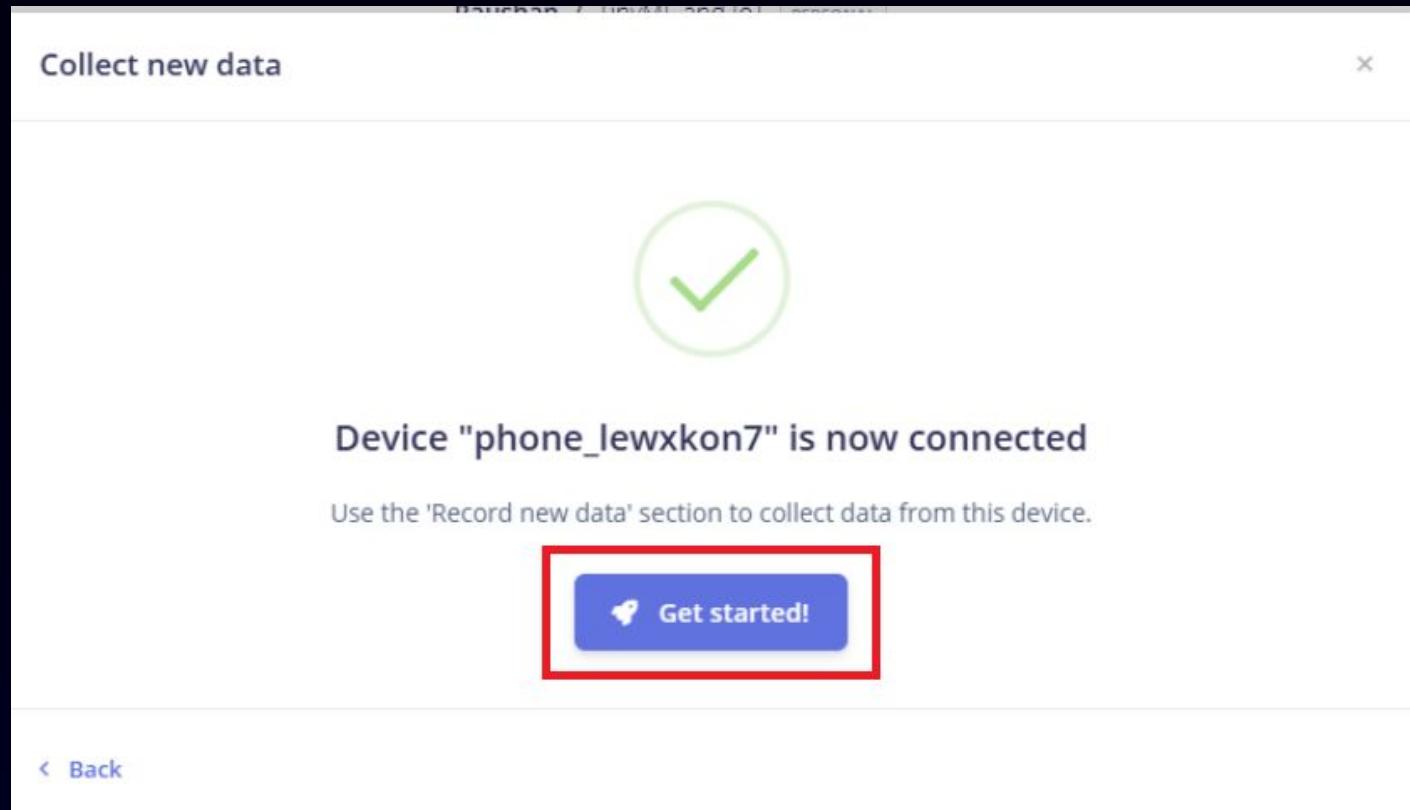


Computer Screen

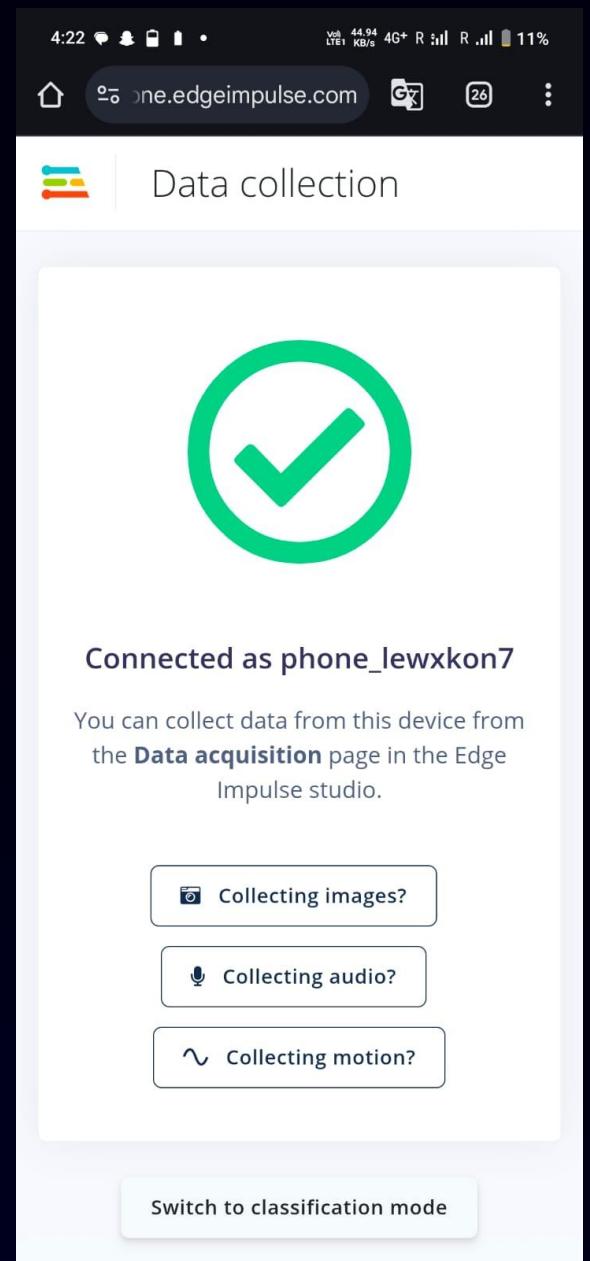


Phone Screen

Step 16: Create account on Edge Impulse Studio & Login



Computer Screen



Phone Screen

Step 17: Verify both the phone and PC Screen

Collect data

Device ⓘ
phone_lewxkon7

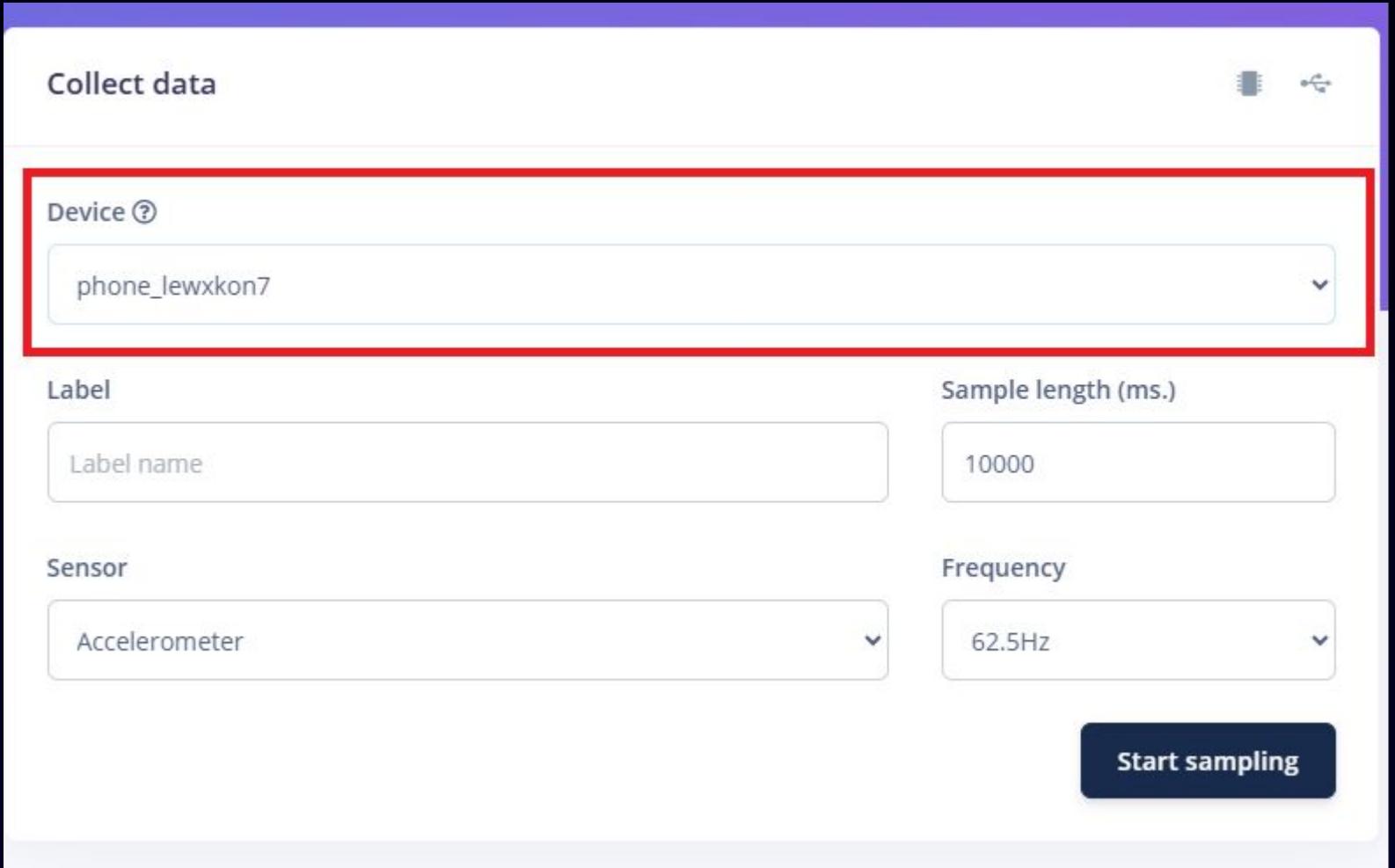
Label
Label name

Sensor
Accelerometer

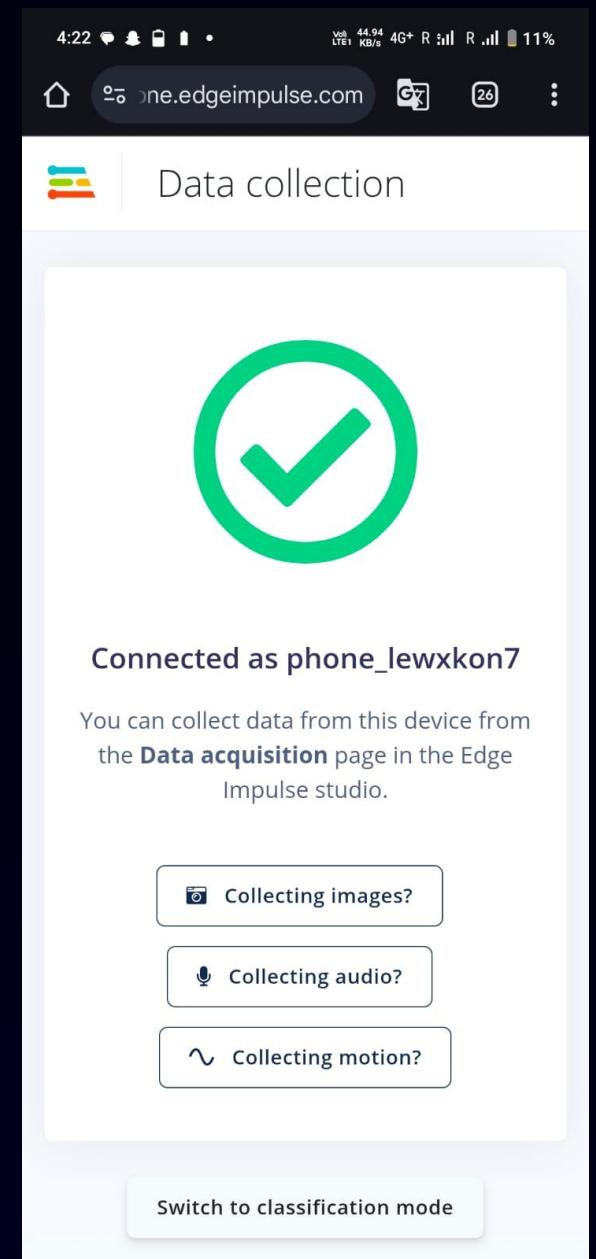
Sample length (ms.)
10000

Frequency
62.5Hz

Start sampling



Computer Screen



Phone Screen



Experiment 1: Fall Detection

Step 18: Verify both the phone and PC Screen

Collect data

Device ⓘ
phone_lewxkon7

Label
Safe

Sensor

- Positional
- Accelerometer
- Microphone
- Camera
- Positional

Sample length (ms.)
10000

Frequency
62.5Hz

Start sampling

This screenshot shows the 'Collect data' interface. It includes fields for Device (set to 'phone_lewxkon7'), Label ('Safe'), and Sensor ('Positional'). Sampling parameters are set to 10000 ms and 62.5Hz. A prominent red box highlights the 'Sensor' dropdown menu, which lists Positional, Accelerometer, Microphone, Camera, and another Positional option.

Select Sensor

Collect data

Device ⓘ
phone_lewxkon7

Label
Safe

Sample length (ms.)
10000

Frequency
62.5Hz

Start sampling

This screenshot shows the 'Collect data' interface with the 'Label' field ('Safe') highlighted by a red box. The other fields (Device, Sample length, Frequency) are visible but not highlighted.

Label the Sample

Step 19: Verify both the phone and PC Screen

Collect data

Device ⓘ
phone_lewxkon7

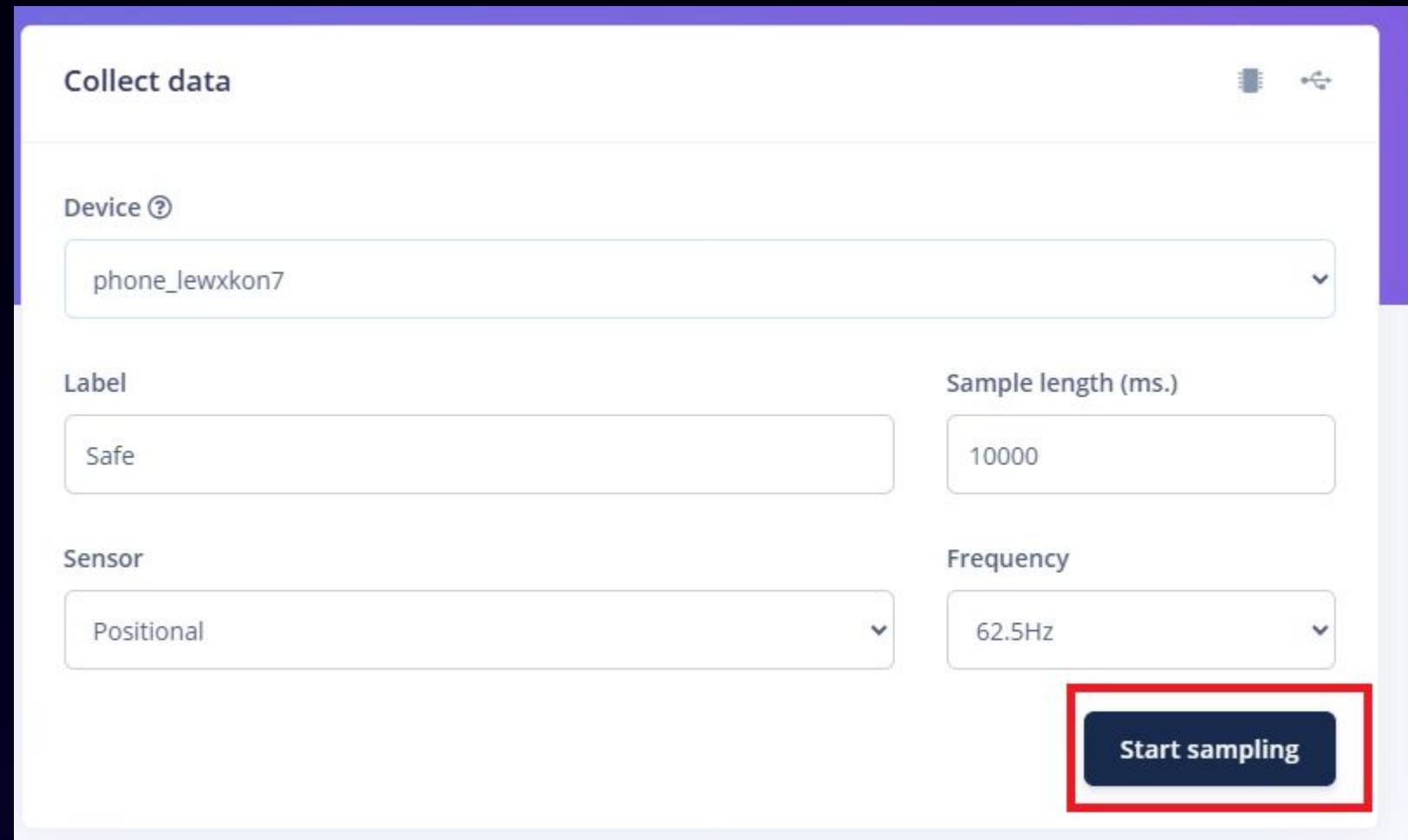
Label
Safe

Sample length (ms.)
10000

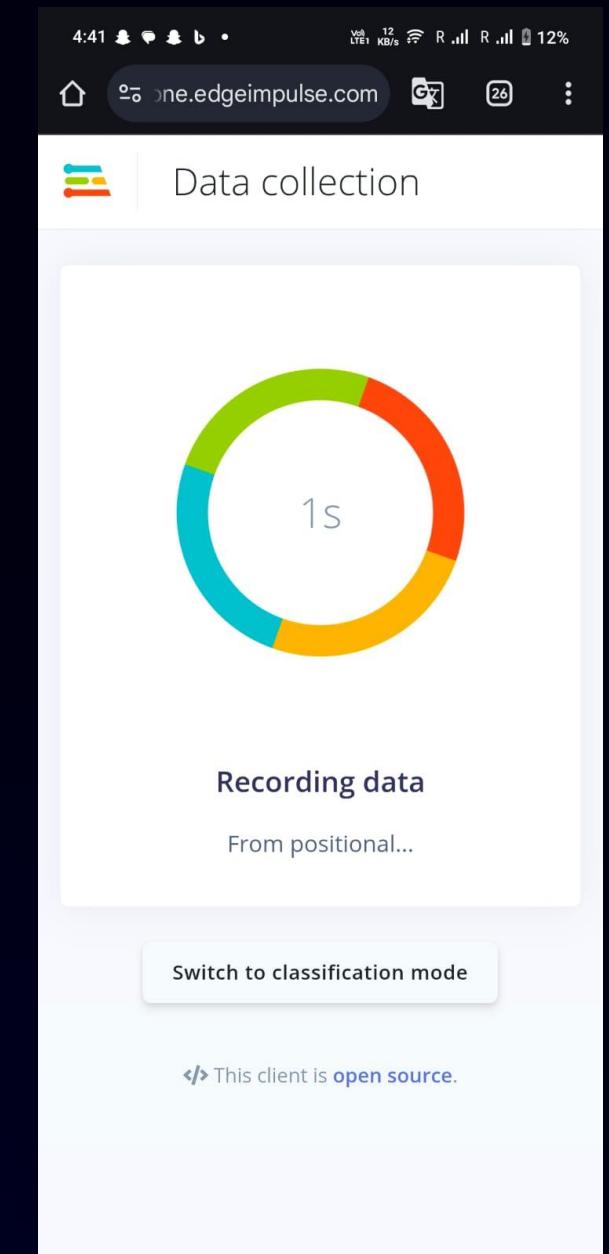
Sensor
Positional

Frequency
62.5Hz

Start sampling

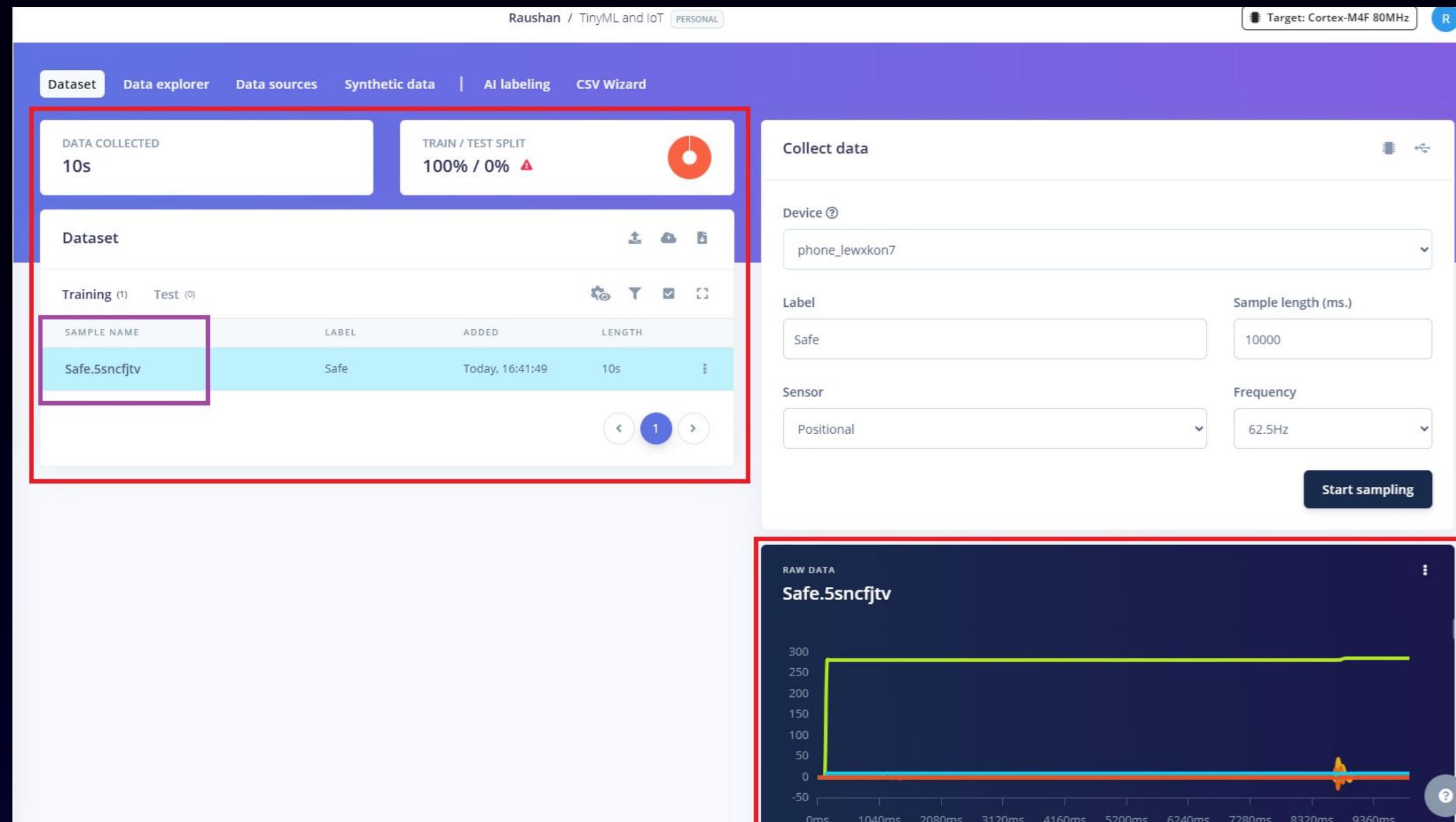


PC: Start Sampling



Phone: Record data

Step 20: Verify both the phone and PC Screen

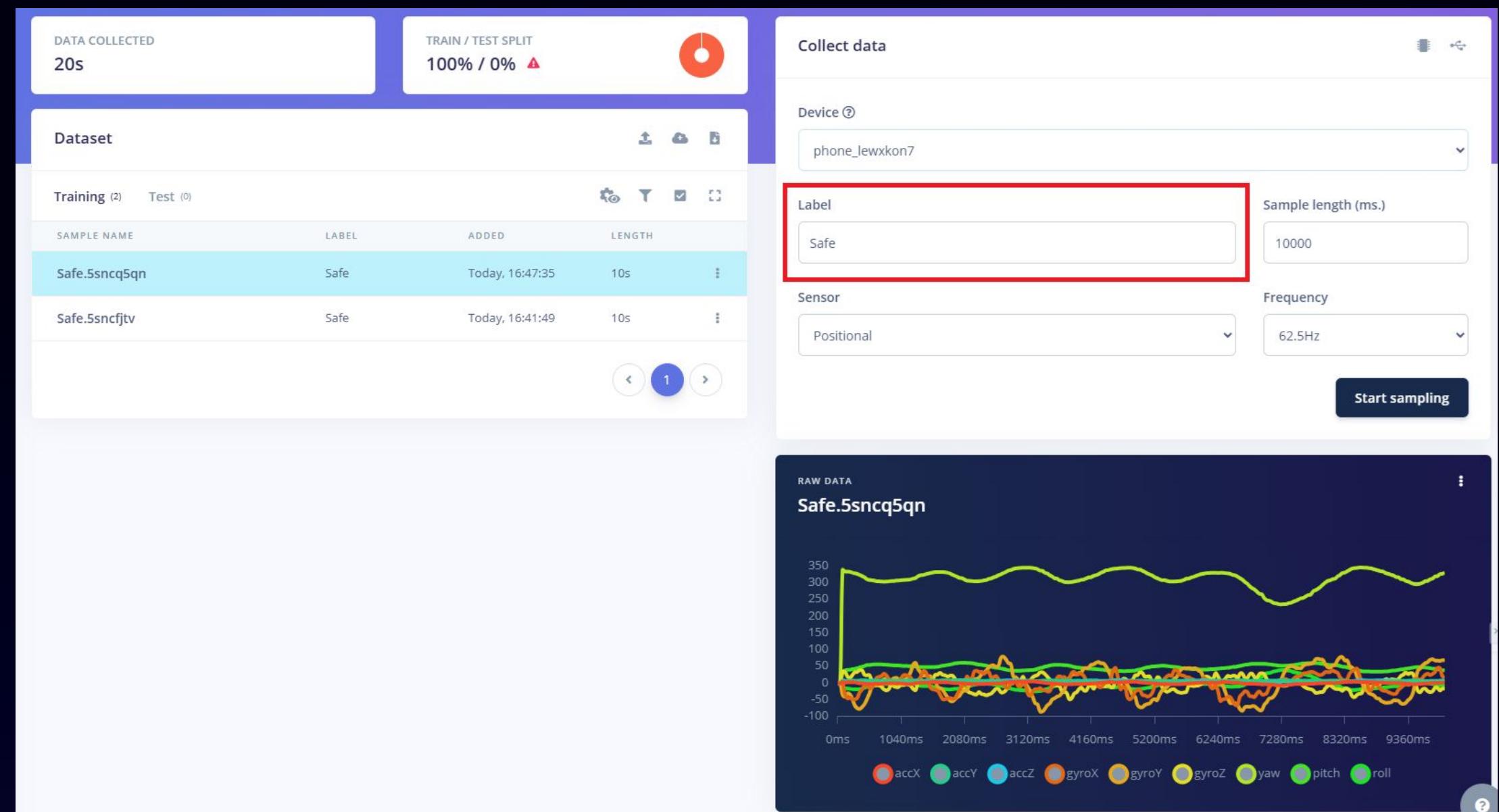


Data collection and Visualization



Labelling: Safe

Step 21: Keep phone in pocket and do normal work



Change Label to “Safe”

Step 22: Keep doing that for around 30-40 samples



Screenshot of a data collection interface showing a dataset of 20 training samples labeled "Safe". The interface includes a "Collect data" panel for setting device, label, sensor, sample length, frequency, and starting sampling. A "RAW DATA" visualization shows a signal over time for one sample.

Dataset

DATA COLLECTED
3m 20s

TRAIN / TEST SPLIT
100% / 0% ⚠

Dataset

Training (20) Test (0)

SAMPLE NAME	LABEL	ADDED	LENGTH
Safe.5sndifjm	Safe	Today, 17:00:52	10s
Safe.5sndhvr0	Safe	Today, 17:00:36	10s
Safe.5sndhe01	Safe	Today, 17:00:17	10s
Safe.5sndh06c	Safe	Today, 17:00:03	10s
Safe.5sndgb3a	Safe	Today, 16:59:42	10s
Safe.5ndfm6q	Safe	Today, 16:59:20	10s
Safe.5sndf84t	Safe	Today, 16:59:06	10s
Safe.5sndeque	Safe	Today, 16:58:52	10s
Safe.5snnddu3q	Safe	Today, 16:58:23	10s
Safe.5snndfu6	Safe	Today, 16:58:08	10s
Safe.5sndcoav	Safe	Today, 16:57:44	10s

Collect data

Device phone_lewxkon7

Label Safe

Sample length (ms.) 10000

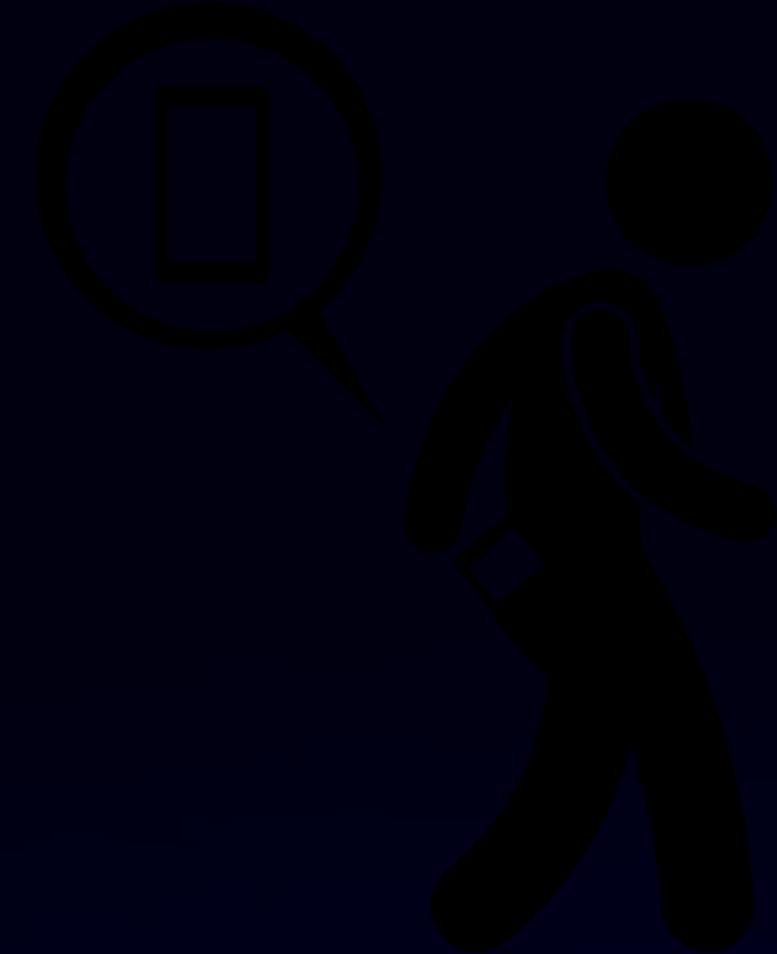
Sensor Positional

Frequency 62.5Hz

Start sampling

RAW DATA
Safe.5sndifjm

Data collection and Visualization



Labelling: Fall

Step 23: Keep collecting fall data.



The screenshot shows a dataset management interface with a purple header. The header includes tabs for Dataset (selected), Data explorer, Data sources, Synthetic data, AI labeling, and CSV Wizard. Below the header, there's a summary section showing 'DATA COLLECTED' (3m 30s) and 'TRAIN / TEST SPLIT' (100% / 0%).

The main area displays a table of collected samples under the 'Dataset' tab. The table has columns for SAMPLE NAME, LABEL, ADDED, and LENGTH. One sample, 'Fall.5sne3fin', is highlighted with a red border and has its row color changed to light blue. The other samples are labeled 'Safe'. The table also includes a column with three dots for each row.

To the right, a 'Collect data' panel is open. It shows the 'Device' set to 'phone_lewxkon7'. In the 'Label' field, the word 'Fall' is entered and highlighted with a red box. The 'Sample length (ms.)' is set to 10000. The 'Sensor' is set to 'Positional' and the 'Frequency' is set to 62.5Hz. A large red box surrounds the 'Start sampling' button. Below the panel is a 'RAW DATA' plot titled 'Fall.5sne3fin'. The plot shows multiple colored lines (green, orange, red) fluctuating over time, with a sharp drop in the green line around 4160ms.

Change Label to “Fall”

Step 24: Keep doing that for around 30-40 samples



Screenshot of a dataset management interface showing a list of recorded samples and a real-time data visualization.

Dataset Overview:

- DATA COLLECTED: 6m 40s
- TRAIN / TEST SPLIT: 100% / 0% (with a warning icon)

Dataset Table:

SAMPLE NAME	LABEL	ADDED	LENGTH
Fall.5snegusa	Fall	Today, 17:17:30	10s
Fall.5sneggmq	Fall	Today, 17:17:16	10s
Fall.5sneg25d	Fall	Today, 17:17:01	10s
Fall.5snefjg5	Fall	Today, 17:16:46	10s
Fall.5snef33i	Fall	Today, 17:16:29	10s
Fall.5snedp3v	Fall	Today, 17:15:46	10s
Fall.5sned9ps	Fall	Today, 17:15:30	10s
Fall.5snecp0u	Fall	Today, 17:15:13	10s
Fall.5snec96s	Fall	Today, 17:14:57	10s
Fall.5snebnim	Fall	Today, 17:14:39	10s
Fall.5sneb8lu	Fall	Today, 17:14:24	10s

Collect data:

- Device: No devices connected
- Label: Fall
- Sample length (ms.): 10000
- Sensor: (dropdown menu)
- Frequency: (dropdown menu)

RAW DATA: Fall.5snegusa

A line graph titled "RAW DATA" for the sample "Fall.5snegusa". The x-axis represents time in milliseconds from 0ms to 9360ms, with major ticks every 1040ms. The y-axis ranges from -800 to 600. The graph displays multiple overlapping colored lines (red, orange, yellow, green, blue) representing different sensor data. A sharp vertical spike is visible at approximately 5200ms, reaching a value of about -750. A horizontal red line highlights this specific spike.

Change Label to “Fall”

Step 25: Select the Model deployment tool

The screenshot shows the TinyML and IoT platform interface. At the top, it displays "Raushan / TinyML and IoT PERSONAL" and "Target: Cortex-M4F 80MHz". The main dashboard includes sections for "DATA COLLECTED" (6m 40s), "TRAIN / TEST SPLIT" (100% / 0%), and "Collect data" (with a note to connect a device). Below this is a "Dataset" section showing "Training (40)" and "Test (0)". A modal window titled "Configure your target device and application budget" is open. It has two tabs: "Target device" and "Application budget". The "Target device" tab is active, showing a dropdown menu where "Cortex-M4F 80MHz" is selected and highlighted with a red box. The "Processor family" dropdown is set to "Cortex-M". The "Clock rate" input field is set to "80 MHz". The "Custom device name (optional)" input field is empty. The "Application budget" tab shows fields for "RAM" (128 KB), "ROM" (1 MB), and "Latency" (100 ms). At the bottom of the modal are "Reset to default settings" and "Save" buttons. To the right of the main window, a zoomed-in view of the "Target device" dropdown is shown, displaying a list of options. The option "Seed SenseCAP A1101 (HX6537-A ARC DSP 400MHz)" is highlighted with a blue box.

Target: Cortex-M4F 80MHz

DATA COLLECTED
6m 40s

TRAIN / TEST SPLIT
100% / 0% ▲

Collect data

Connect a device to start building your dataset.

Dataset

Training (40) Test (0)

RAW DATA
Click on a sample to load...

Configure your target device and application budget

Target device

Processor family

Clock rate (MHz)

Custom device name (optional)

Application budget

RAM (KB)

ROM (MB)

Latency (ms)

Reset to default settings Save

Target device

Processor family

Clock rate (MHz)

Custom device name (optional)

Application budget

RAM (MB)

ROM (MB)

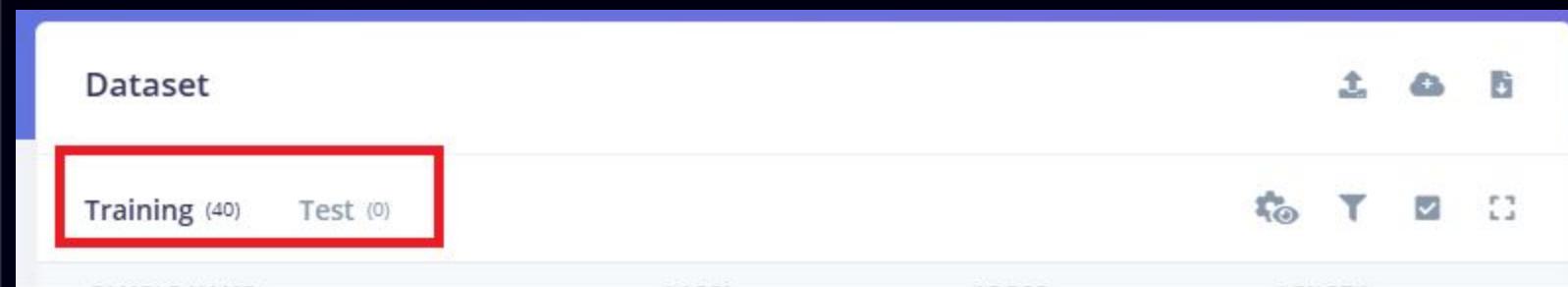
Latency (ms)

Reset to default settings Save

Seed SenseCAP A1101 (HX6537-A ARC DSP 400MHz)

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Step 26: Divide Training and Test sample to 100/20 %



Dataset			
Training (40)	Test (0)	Filter	Check
SAMPLE NAME	LABEL	ADDED	LENGTH
Fall.5snegusa	Fall	Today, 17:17:30	10s
Fall.5sneggmq	Fall	Today, 17:17:16	10s
Fall.5sneg25d	Fall	Today, 17:17:01	10s
Fall.5snefjg5	Fall	Today, 17:16:46	10s
Fall.5snef33i	Fall	Today, 17:16:29	10s
Fall.5snedp3v	Fall	Today, 17:15:46	10s
Fall.5sned9ps	Fall	Today, 17:15:30	10s
Fall.5snecp0u	Fall	Today, 17:15:13	10s
Fall.5snec96s	Fall	Today, 17:14:57	10s
Fall.5snebnim	Fall	Today, 17:14:39	10s
Fall.5sneb8lu	Fall	Today, 17:14:24	10s

Step 27: Move 4 samples from safe & fall each to test

Dataset Data explorer Data sources Synthetic data | AI labeling CSV Wizard

DATA COLLECTED
6m 40s

TRAIN / TEST SPLIT
100% / 0% ⚠

Dataset

Training (40) Test (0)

SAMPLE NAME	LABEL	ADDED	LENGTH	⋮
Fall.5snegusa	Fall	Today, 17:17:30	10s	⋮
Fall.5sneggmq	Fall	Today, 17:17:16		⋮
Fall.5sneg25d	Fall	Today, 17:17:01		⋮
Fall.5snefjg5	Fall	Today, 17:16:46		⋮
Fall.5snef33i	Fall	Today, 17:16:29		⋮
Fall.5snedp3v	Fall	Today, 17:15:46		⋮
Fall.5sned9ps	Fall	Today, 17:15:30		⋮
Fall.5snecp0u	Fall	Today, 17:15:13		⋮
Fall.5s nec96s	Fall	Today, 17:14:57	10s	⋮
Fall.5snebnim	Fall	Today, 17:14:39	10s	⋮
Fall.5sneb8lu	Fall	Today, 17:14:24	10s	⋮

Move to test set

DATA COLLECTED		TRAIN / TEST SPLIT	
6m 40s		80% / 20% ?	
			
Dataset		  	
Training (32) Test (8)			
SAMPLE NAME	LABEL	ADDED	LENGTH
Fall.5sne7ib3	Fall	Today, 17:12:23	10s
Fall.5sne732u	Fall	Today, 17:12:07	10s
Fall.5sne5vj9	Fall	Today, 17:11:31	10s
Fall.5sne3fin	Fall	Today, 17:10:09	10s
Safe.5sndifjm	Safe	Today, 17:00:52	10s
Safe.5sndhe01	Safe	Today, 17:00:17	10s
Safe.5sndf84t	Safe	Today, 16:59:06	10s
Safe.5sndeqfe	Safe	Today, 16:58:52	10s
 1 2 3 			



Small Devices. Big Impact.

Thank You for Your Attention