**PDM Benchmark**

Initializing application...

**Select Page**
- ◉ Dataset Visualization
- ○ Model Training
- ○ Results Analysis

🐍 PDM Benchmark Tool v1.0

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**(a)**

✅ Loaded 15 datasets

# 📊 Dataset Visualization

**Select Dataset**

01 - Paderborn ⌄

## 📄 Dataset Information

📇 **Name:** Paderborn

📦 **Features:** vibration, current, temperature, speed, torque, radial_load

🔍 **Fault Types:** normal, inner_race, outer_race, cage

📐 **Design Target:** Fault diagnosis

💼 **Property:** Multiple sensors

📟 **Sampling Rate:** 64000 Hz

⏱ **Duration:** 4 sec

📝 **Description:**

Paderborn University Bearing Dataset – High-resolution vibration and motor current signals for 26 damaged and 6 healthy bearing states under various operating conditions.
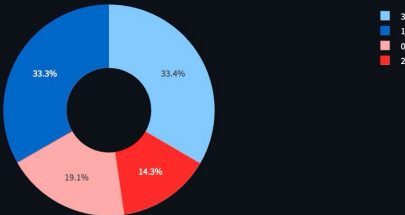
**(b)**

## 📐 Feature-wise Distribution and Signals

**Select Feature**

Feature 1 ⌄

## 🎯 Class Distribution

**Class Distribution**

- 3 — 33.4%
- 1 — 33.3%
- 0 — 19.1%
- 2 — 14.3%

**(c)**

📊 **Sample Time Domain Signals by Class**
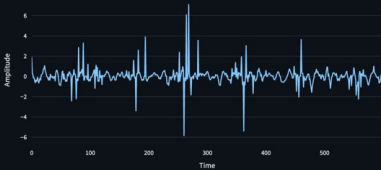
**Choose Class**

Class 0 ⌄

**Select a sample from class 0**

Sample 1 ⌄

Selected Sample ID: 0

**Time Domain Visualization**
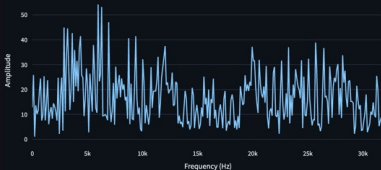
**Time Domain Signal - Class: 0**

**(d)**

**Frequency Domain Visualization**

Feature 1

☐ Use log scale for amplitude (Feature 1)

**FFT Spectrum - Feature 1**

**Dominant Frequencies (Feature 1)**

| | Frequency (Hz) | Amplitude |
|---|---|---|
| 0 | 5,973.3333 | 54.2128 |
| 1 | 6,293.3333 | 53.1817 |
| 2 | 6,933.3333 | 47.0734 |
| 3 | 2,880.0000 | 44.9337 |
| 4 | 3,200.0000 | 44.5762 |

Deploy