



PDIoT App Demonstration

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Demo Video: <https://youtube.com/shorts/UuGcydXsWHM?feature=share>

App Features

PDIoT App

Login/Register

Enter your email

Enter your password

LOGIN

 Continue with Google

Don't have an account? Sign up

PDIoT App

Create an account

Name

Enter your email

Enter your password

Confirm Password

SIGN UP

Already have an account? Log in

PDIoT App

01-11-2023

30-11-2023

APPLY FILTER

Date	Activity	Breathing
17-11-2023	lying down back	breathingNormal
17-11-2023	lying down back	breathingNormal
17-11-2023	lying down back	breathingNormal
17-11-2023	lying down back	breathingNormal
17-11-2023	lying down back	breathingNormal
17-11-2023	lying down back	breathingNormal
17-11-2023	lying down back	breathingNormal
17-11-2023	lying down back	other
17-11-2023	lying down back	other
17-11-2023	lying down back	other
17-11-2023	lying down back	other
17-11-2023	lying down back	other
17-11-2023	lying down back	other
17-11-2023	lying down back	other
17-11-2023	lying down back	other
17-11-2023	running	other
17-11-2023	descending stairs	other
17-11-2023	lying down on stomach	other
17-11-2023	normal walking	other
17-11-2023	running	other
17-11-2023	running	other
17-11-2023	descending stairs	other
17-11-2023	running	other
17-11-2023	descending stairs	other
17-11-2023	running	other
17-11-2023	lying down on left	other
17-11-2023	lying down on stomach	other
17-11-2023	descending stairs	other
17-11-2023	running	other
17-11-2023	lying down on stomach	other
17-11-2023	lying down on stomach	other
17-11-2023	lying down on stomach	other
17-11-2023	lying down on stomach	breathingNormal
17-11-2023	lying down on stomach	breathingNormal
17-11-2023	lying down on stomach	breathingNormal

PDIoT App

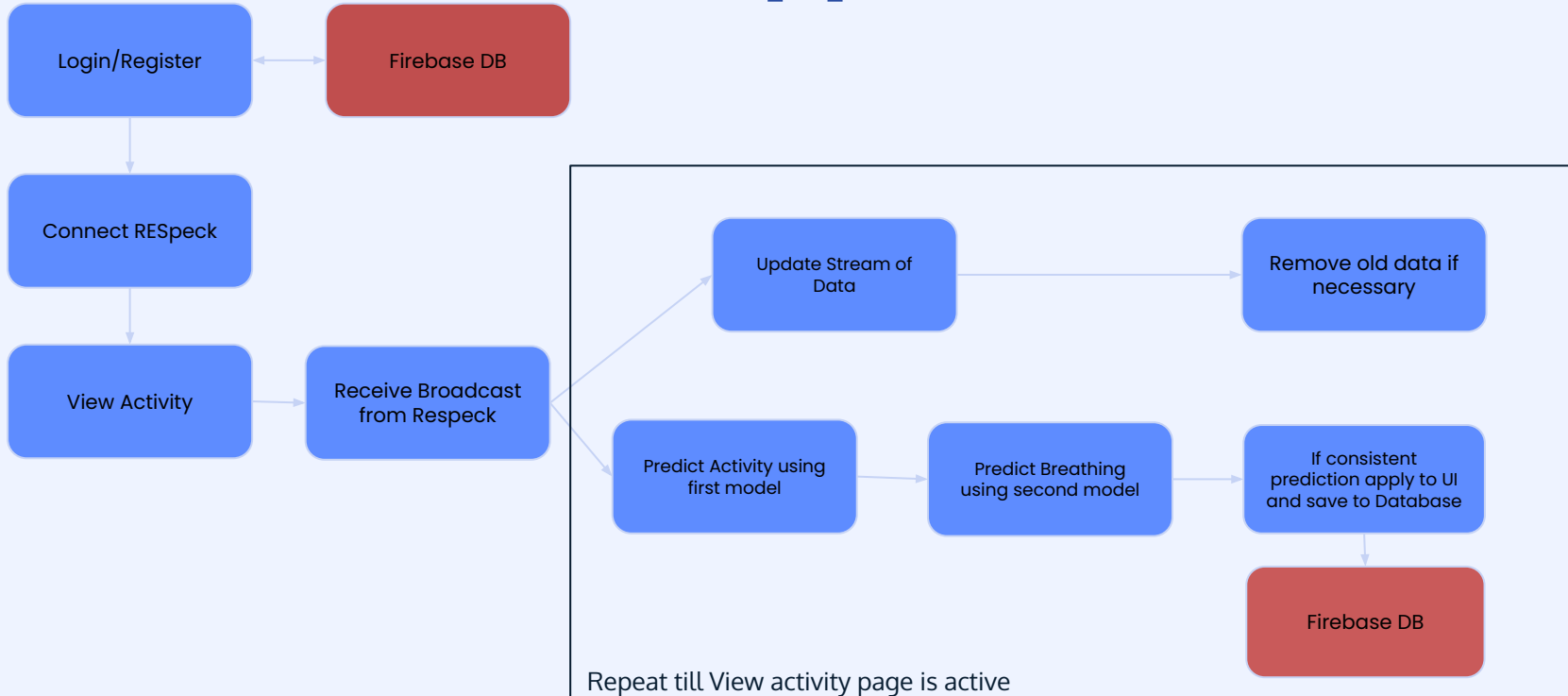
View Activity

Respect Connection Status:
Disconnected



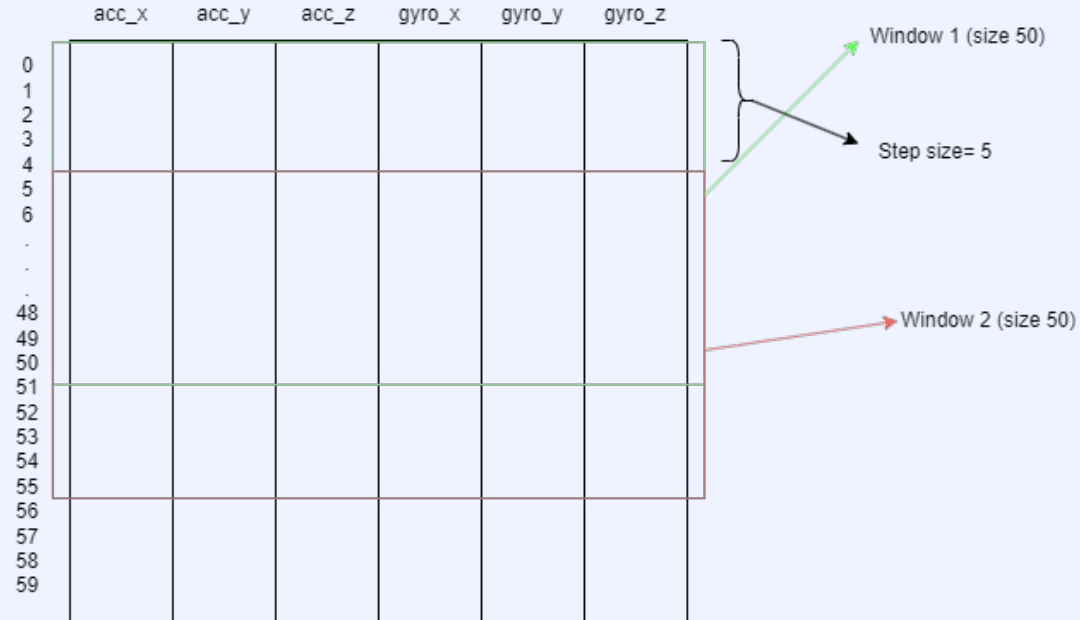
Activity: Unknown
Breathing: Not detected

Android App Backend

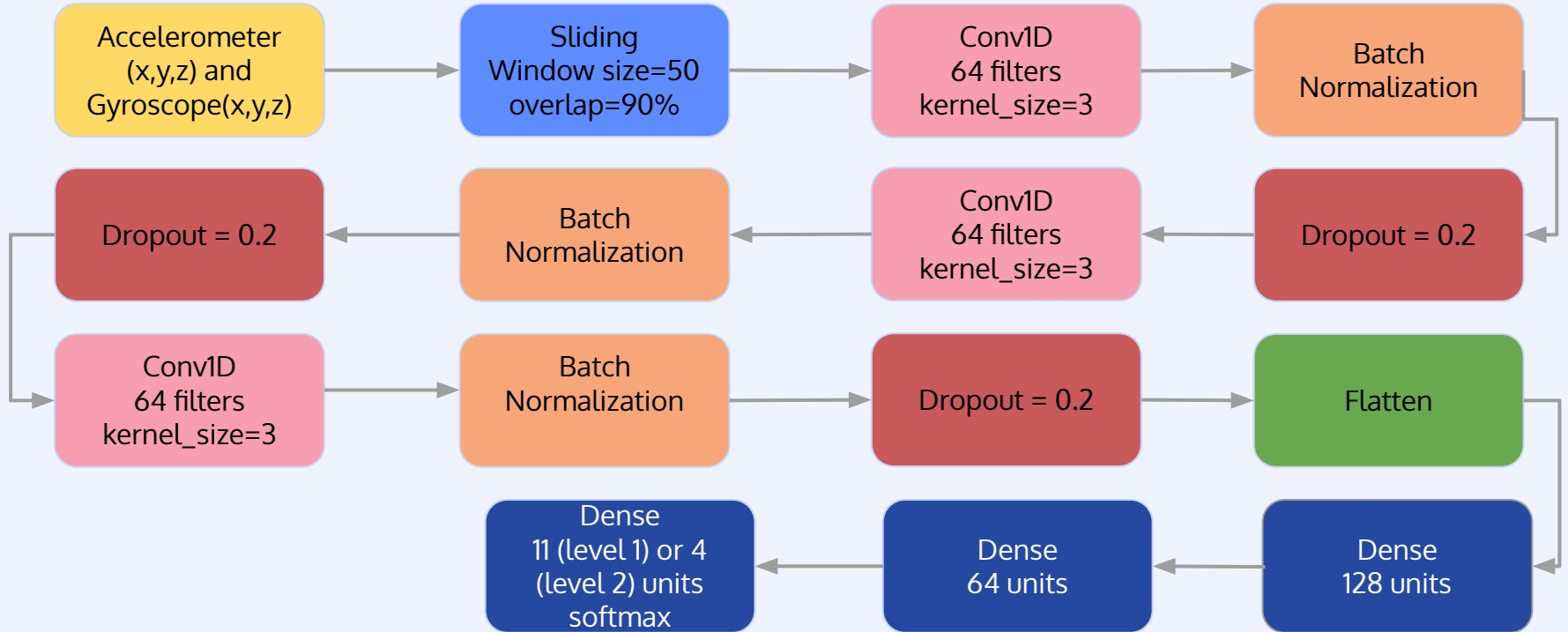


Machine Learning Algorithm

Sliding Window with overlap of 90%



Model Architecture



Performance Statistics

- Combined accuracy of both models - 89.52%
 - Activity Classification Model - 98.6%
 - Breathing Classification Model - 78.61%
- Communication latency - 1.8 seconds
- Power Consumption - Light usage of CPU
- CPU Usage - 13%
- Memory Usage - 156MB after 1 min of usage of live activity

Conclusion & Reflection

- Effective Real-Time Data Processing
- Balance between accuracy vs communication latency
- Hyperparameter tuning
- Integrating Machine Learning Models
- Innovation and Creativity
- Accelerated self-learning
- Communication within group to ensure high quality product

