

Cardiomatics for Education

Task 1.

The ECG Analysis Report is incomplete. Using **"ECG tutorial: Basic principles of ECG analysis"** calculate heart rate, recognize rhythms and beats. Then fill the blank spaces on ECG strips.

Fig 1. Calculate HR between beats.

Fig 2, 3. Recognize rhythm - look at the HR between consecutive normal beats.

Fig 4, 5. Name the beat which looks different than others.

Fig 6. Specify trigeminy type.

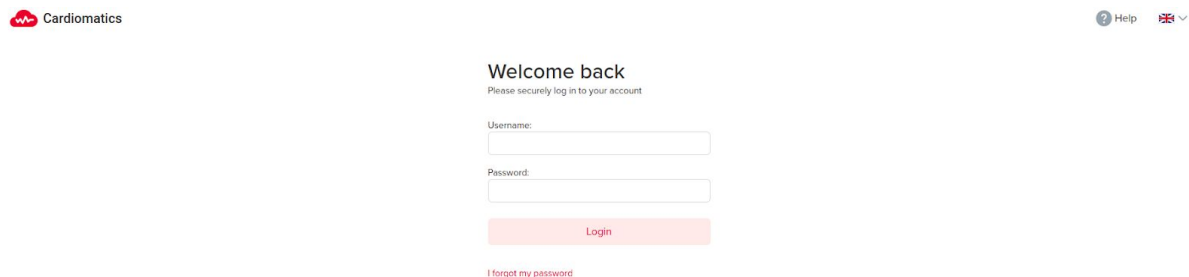
Fig 7. * Recognize rhythm. Note that three beats (of the same type) at a rate of > 100 bpm appeared one after the other.

Task 2.

Check the results by comparing your answers and the automatic analysis report.

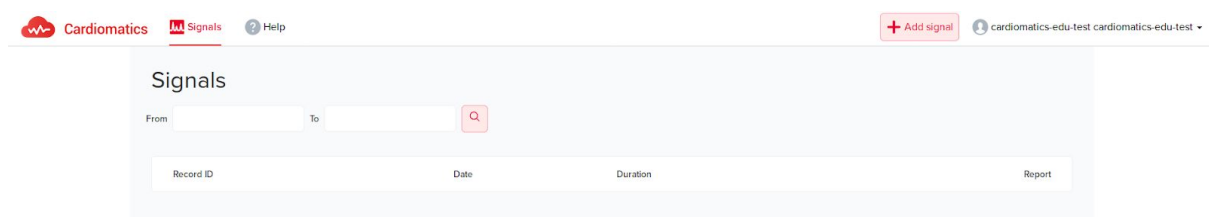
To analyse an ECG signal, proceed as follows:

1. Open the website <https://app.cardiomatics.com/>, then log in with your given login and password.



The image shows the login page of the Cardiomatics application. At the top left is the Cardiomatics logo. At the top right are links for 'Help' and a language selector (UK flag). The main heading is 'Welcome back' with the subtext 'Please securely log in to your account'. Below this are two input fields: 'Username:' and 'Password:'. A red 'Login' button is positioned below the password field. At the bottom, there is a link that says 'I forgot my password'.

2. To select files from a disk click the **Add Signal** button...



The image shows the 'Signals' page of the Cardiomatics application. The top navigation bar includes the Cardiomatics logo, a 'Signals' tab, a 'Help' link, a red '+ Add signal' button, and a user profile dropdown menu. The main section is titled 'Signals' and contains a search bar with 'From' and 'To' date pickers and a search icon. Below the search bar is a table with the following columns: 'Record ID', 'Date', 'Duration', and 'Report'.

and choose "ECG.EDF" file from your disk - **path to the file will be given by the lecturer.** There is a possibility to change record ID in this step. Please confirm upload by clicking **Upload signal** button.

Add single signal ✕

Record ID

We prefilled the record ID. You can change it now.

 ECG.EDF ✕

Drag & drop files here or [select files manually](#).

Cancel Upload signal

- A list of uploaded files is available under the **Signals** tab (upper-left corner).

Record ID	Date of upload ↑	Duration	Report
ECG	19/02/2020, 09:09:05	No information	⬇ Uploading (28%) ⌵

- To get the report for a particular signal, click the **Generate report** button...

Record ID	Date of upload ↑	Duration	Report
ECG	19/02/2020, 09:09:05	No information	Generate 🗑

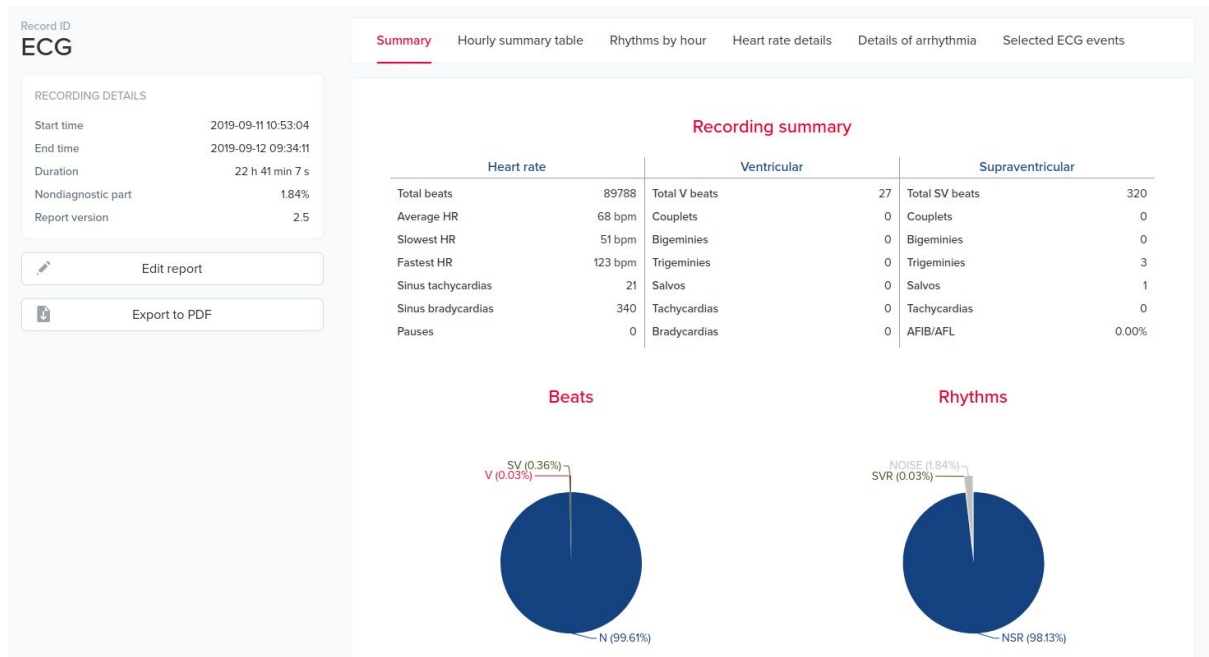
...and wait a few seconds.

Record ID	Date of upload ↑	Duration	Report
ECG	19/02/2020, 09:09:05	No information	⬆ Analysing...

- Interactive report is ready when the **Show report** button replaces the charging sign. To view the report, click the **Show report** button.

Record ID	Date of upload ↑	Duration	Report
ECG	19/02/2020, 09:09:05	22 h 41 min 7 s	Show report

There is a possibility to open and download the PDF report under the “Export to PDF” button.



- After finishing your work on the website, please logout using **Logout** icon in the upper-right corner.

Task 3.

Your feedback is really important for us. Please fill the survey:

<https://forms.gle/B6HKAy9G2m7YRGePA>