Biosignal Processing

Assignment 3: Validation of the PPG beat detection algorithm

Validate your implementation of the algorithm from Papini et al. on the "Wrist PPG During Exercise" database.

- Try and fix errors from previous submission (if any)
- Choose an appropriate validation strategy (if you have not optimized the algorithm based on the data, you can consider it as an independent validation set)
- Choose appropriate metrics for validating the beat detection and the inter-beat interval durations
- Resubmit Matlab code for the algorithm with fixed errors and the Matlab code to perform your validation via Moodle until Nov 20, 23:59. (up to 10 points)
- Summarize your algorithm and the validation results in a report and discuss your findings and submit the report as PDF file until Nov 22, 23:59. (up to 15 points)
- Prepare a presentation for the final exam (15 points) and present it as a group on Nov 23. (up to 15 points)

Questions

Please use the Moodle forum to ask questions if you think they (or their answer) can be relevant for the other groups, too.

Data

Hand-scored reference annotations for heart beats from ECG are available for the database and have been uploaded as text files to https://moodle.technikum-wien.at/mod/folder/view.php?id=567101.