Guide: <http://www.mathworks.com/academia/student_center/tutorials/signal-processing-tutorial-launchpad.html?s_tid=ac_sp_tut_til>

1. Load EEG single channel
2. Plot it: <https://www.mathworks.com/help/signal/examples/signal-generation-and-visualization.html?prodcode=SG&language=en>
3. Signal smoothing: <https://www.mathworks.com/help/signal/examples/signal-smoothing.html?prodcode=SG&language=en>
4. Filtering
   1. IIR: <https://www.mathworks.com/help/signal/ug/iir-filter-design.html>
   2. Digital: <https://www.mathworks.com/help/signal/examples/practical-introduction-to-digital-filtering.html?prodcode=SG&language=en>
   3. Make notch filter
5. Spectral analysis
   1. Power spectrum: <https://www.mathworks.com/help/signal/examples/practical-introduction-to-frequency-domain-analysis.html?prodcode=SG&language=en>
   2. <https://www.mathworks.com/help/signal/examples/measuring-the-power-of-deterministic-periodic-signals.html?prodcode=SG&language=en>
   3. Spectrogram: <https://www.mathworks.com/help/signal/examples/practical-introduction-to-time-frequency-analysis.html?prodcode=SG&language=en>
   4. <https://www.mathworks.com/help/signal/examples/spectral-analysis-of-nonuniformly-sampled-signals.html?prodcode=SG&language=en>
6. Peak analysis: <https://www.mathworks.com/help/signal/examples/peak-analysis.html?prodcode=SG&language=en>
7. Signal statistics: <https://www.mathworks.com/help/signal/descriptive-statistics.html>
8. Pulse/transition characteristics: <https://www.mathworks.com/help/signal/examples/measurement-of-pulse-and-transition-characteristics.html?prodcode=SG&language=en>
9. Linear Prediction and Autoregressive Modeling: <https://www.mathworks.com/help/signal/examples/linear-prediction-and-autoregressive-modeling.html?prodcode=SG&language=en>
10. Wavelets:
    1. <https://www.mathworks.com/examples/wavelet/mw/wavelet-ex38647771-visualizing-wavelets-wavelet-packets-and-wavelet-filters>
    2. <https://www.mathworks.com/examples/wavelet/mw/wavelet-ex77408607-r-wave-detection-in-the-ecg>
    3. <https://www.mathworks.com/examples/wavelet/mw/wavelet-ex11554099-continuous-wavelet-analysis>
11. QRS detection:
    1. <http://www.mathworks.com/help/dsp/examples/real-time-ecg-qrs-detection.html>
    2. <https://www.mathworks.com/matlabcentral/fileexchange/45840-complete-pan-tompkins-implementation-ecg-qrs-detector>