FINAL PROJECT 2017

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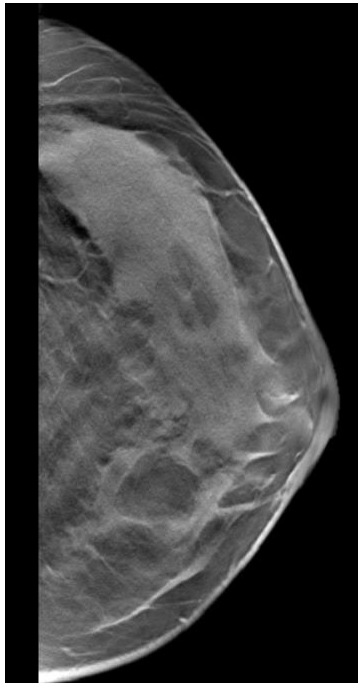
Final Project. Challenge!

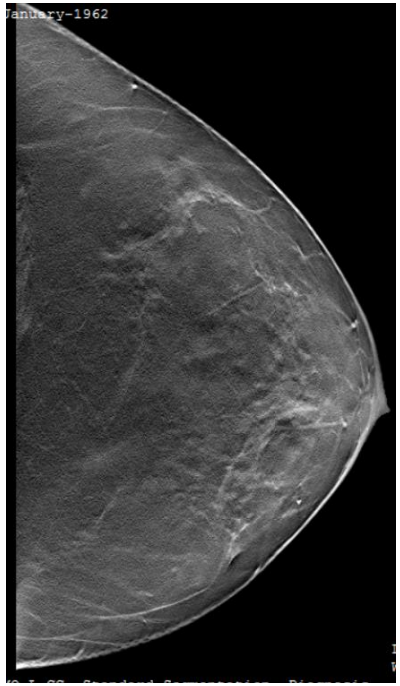
- Breast density estimation in DBT
  - Risk factor for developing breast cancer (5x) and lesion masking.
  - Breast density is classified using 4 labels (BIRADS).
    - BIRADS 1: almost fatty (glandular tissue < 25%).
    - BIRADS 2: scattered glandular tissue between 25-50%
    - BIRADS 3: heterogeneously dense. (50-75%)
    - BIRADS 4: extremely dense (> 75%).
  - Choose your own implementation
  - Mevislab / ITK / Matlab

- Evaluaton Criteria
  - Accuracy, correct classification
  - Methodology
  - Computational time

B-4



B-1



Final Project

- Data with ground truth (BIRADS class).
  - Breast DBT images from 16 patients (4 class each).
  - For each patient we have original images and BIRADS class (1-4) in a csv.
- Data Given the day of the challenge (15th May)
  - 4 new DBT **without** the GT.
  - I will evaluate online.
- Aim
  - Classify the images into a BIRADS class for density
  - You can use the same dataset for training your algorithm (if needed), but do not use the same patient for train & test!
  - Evaluate

Final Project

- Supervision and follow up
  - Friday 31 March 10-12 (CV Lab)
  - Friday 28 April 10-12 (CV Lab)
  - Submission deadline
    - 17th May: oral presentations
    - 24th May: report and source code.
  - Challenge day: 24th May
  - Submission
    - Presentation (ppt, odps)
    - Code and executable.
    - Report in paper format (latex).

Final Project. Evaluation

- Good coding practice 10%
  - Correct and clear programming, use of functions/objects, templates, etc and consistent code and comments.
- Methodology 25%
  - Methods used are well justified, sound and clear.
  - Know the limitations (when does it fail).
- Evaluation and results 20%
  - Accuracy. Sensitivity and specificity. Dice Similarity coefficient
  - Computational time
- Oral presentation 25%
- Report 20%