THE MACHINE LEARNING CANVAS

Designed for: doctors | Designed by: GitHubAlejandroDR | Date:

PREDICTION TASK

1) Type of task? 2) Entity on which predictions are made? 3) Possible outcomes?

1)Pathology Complete Response (PCR) classification task

2) Binary prediction

3) Positive and Negative PCR

DECISIONS

1) How are predictions turned into proposed values for the end-user? Mention parameters of the process / application that does that.

1) Personalized medicine clinical assistance recommendation. Help doctors to make more precise decisions based on clinical and genomic data.

VALUE PROPOSITION

1) What are their objectives? 2) How will they benefit from the ML system? Mention workflow/interfaces.

1) The end users are doctors.

2) Identifying risk patients

DATA COLLECTION

1) Strategy for initial train set & continuous update. Mention collection rate, holdout on production entities, cost/constraints to observe outcomes.

1) Initial unique data set

DATA SOURCES

1) Where can we get (raw) information on entities and observed outcomes? Mention database tables, API methods, websites to scrape, etc.

1) CBioPortal database

IMPACT SIMULATION

1) Can models be deployed? Which test data to assess performance? 2) Cost/gain values for (in)correct decisions? Fairness constraint?

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MAKING PREDICTIONS

1) When do we make real-time / batch pred.? 2) Time available for this + featurization + post-processing? 3) Compute target?

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BUILDING MODELS

1) How many prod models are needed? 2)When would we update? 2)Time available for this (including featurization and analysis)?

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FEATURES

1) Input representations available at prediction time, extracted from raw data sources.

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MONITORING

1) Metrics to quantify value creation and measure the ML system's impact in production (on end-users and business)?

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