

Collaboration in Interdisciplinary Groups

But first some notes

- Expectations on prior knowledge about art, math, and ML when reading papers
- Everybody on Slack, Autolab, and Piazza?!?
- Office hours poll on Piazza (please fill out by end of today)

Why Collaborate

**All of you are very smart and
more than capable (that's why we
picked you)**

**But you come from fairly diverse
backgrounds**

**And we want to leverage that
diversity to create both a great
learning environment and
encourage novel and interesting
projects**

Challenges

Challenges

- different domains have different vocabularies (even when talking about the same thing)

**dependent variable, target, "response variable",
"regressand", "predicted variable", "measured
variable", "explained variable", "experimental
variable", "responding variable", "outcome variable",
"output variable" or "label", etc... (and that's just
within statistics 🤨)**

Challenges

- Different vocabularies (even when talking about the same thing)
- Unique Processes
- Assumed prior knowledge

Strategies

The golden rule 🙌

Communication and Empathy above all

**And approach collaboration with
a growth mindset**

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(i.e. try to learn from your collaborators)

Strategies

- Create a shared mental/knowledge model
 - i.e. get everyone on the same page
 - if someone mentions a term or concept you don't understand, clarify before moving on.
- Shared vision/goals of project
- Clearly defined deliverables
- Clearly defined expectations from members
- Clear ownership lines -- who is responsible for what

Communication

- Establish communication links (how will we chat)
- Open and frequent communication
- Mutual respect/trust and ability to compromise
- Explicit decision making process
 - Consensus
 - Democratic
 - etc.

Pair Programming

Pair Programming (surprisingly effective and fun)



Jonathan Dinu // Art and Machine Learning // Spring 2016

Pair Programming

- Two monitors
- Two keyboards
- **One** Computer

Pair Programming

- Navigator
 - Keeps track of the big picture
 - Directs flow of work
 - Reviews code
- Driver
 - Implements tasks provided by navigator
 - Explains their process/approach
- Switch roles at regular, predefined intervals (i.e. every 5 or 10 minutes)