

Validation, Verification, and Learned Components

Michael Furlong
SGT Inc./NASA Ames' Intelligent Robotics Group

All Opinions Expressed are My Own

Validation

Verification

Validation – Are you doing the right thing?

Verification

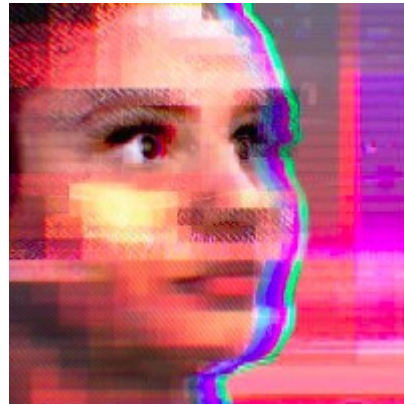
Validation – Are you doing the right thing?

Verification – Are you doing the thing right?

Validation in Learned Systems

The algorithm and the data is what defines the performance of the system.

Microsoft Tay



More Serious Application

Predictive Policing

Challenge 1

Create FDA or “AllTrials” for systems with learned components.

Verification

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Verification

- Machine Learning approximates complex functions we don't necessarily understand
 - But we don't necessarily understand the function after we've “learned” it.
- Other scientific fields have encountered this before.

Challenge 2

Promote Empiricism by
creating rewards for reproduction studies and
rigorous experimental methods.