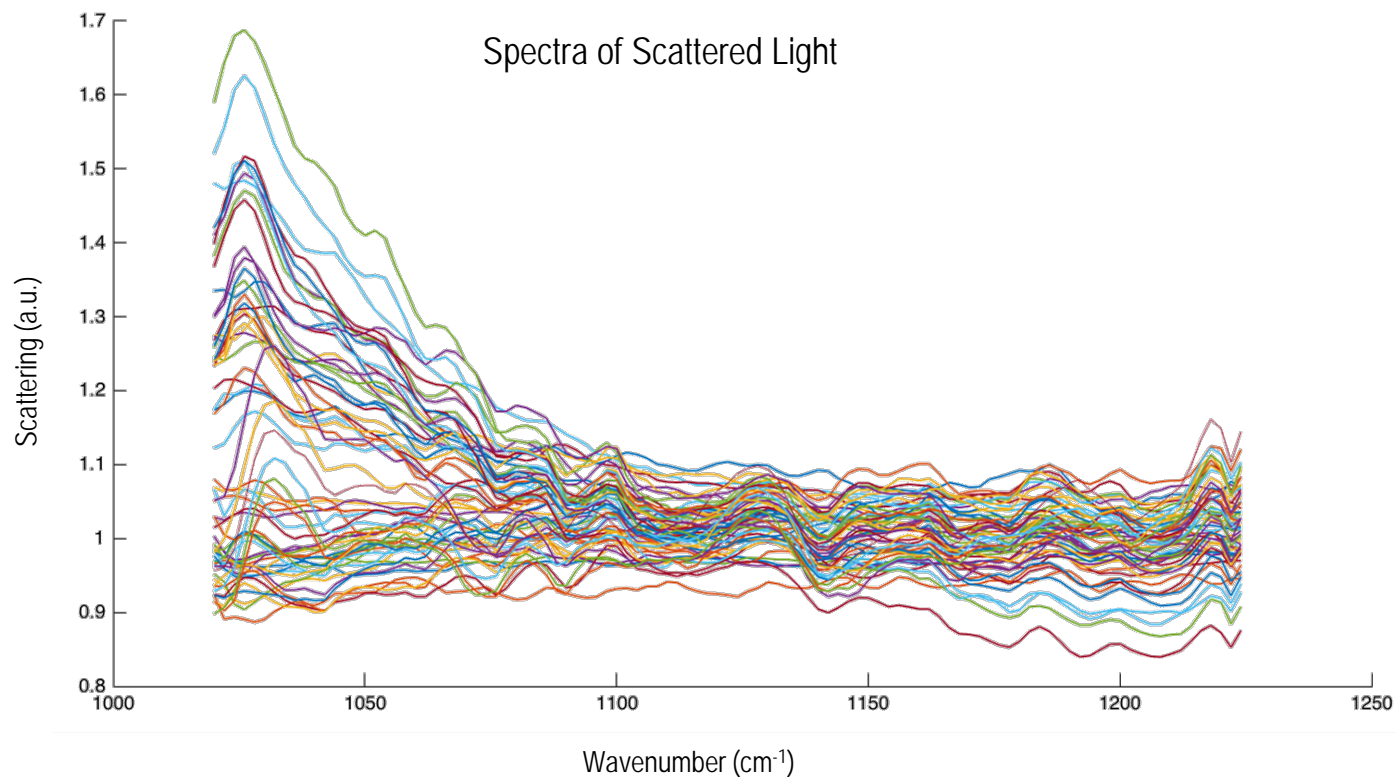


Evaluating Predictive Machine Learning Models for Non-Invasive Glucose Sensing using Mid-Infrared Light

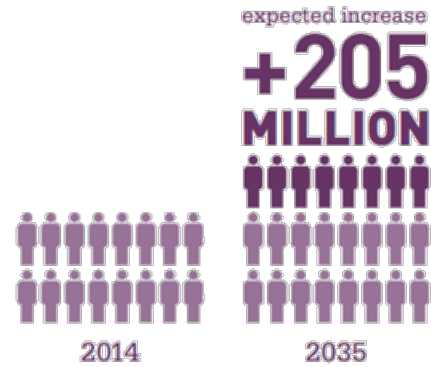
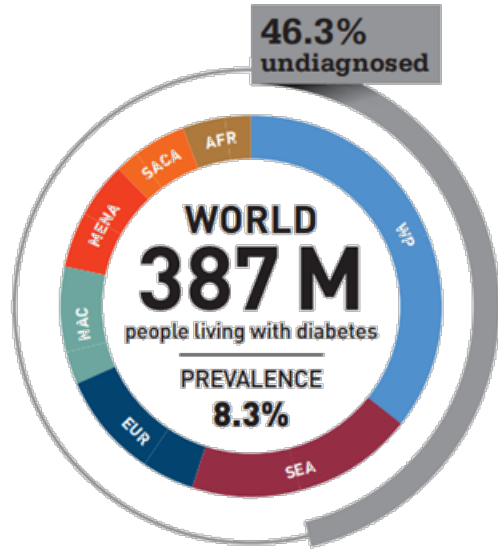
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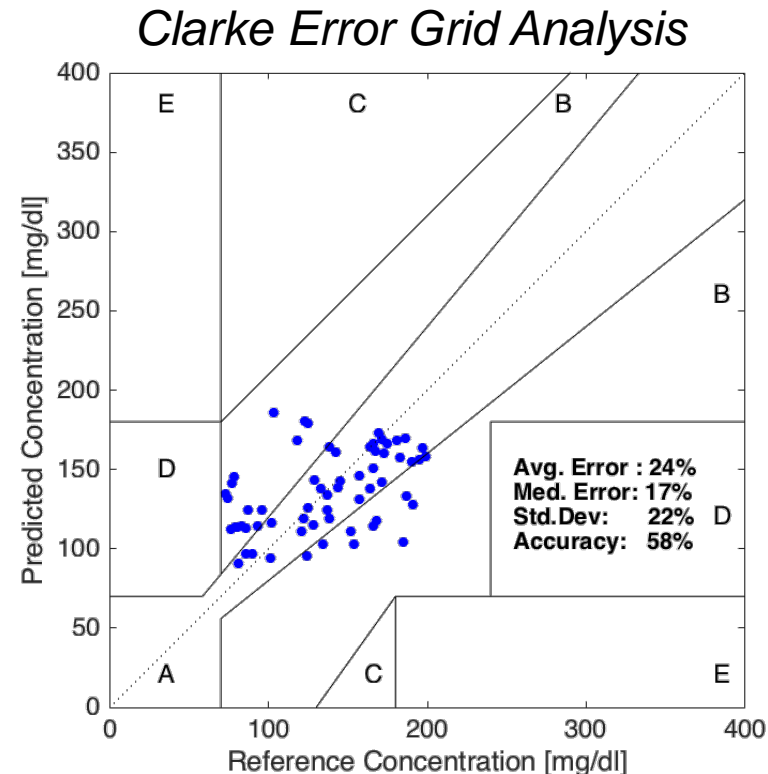
Background and Motivation



Machine Learning Algorithms?

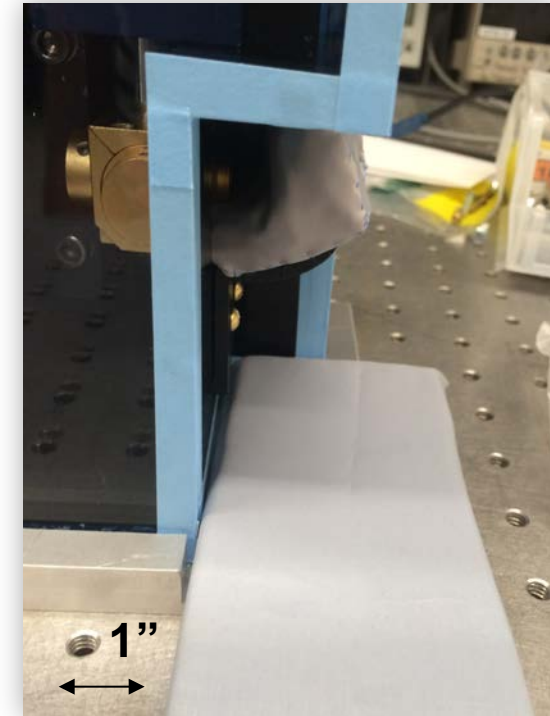
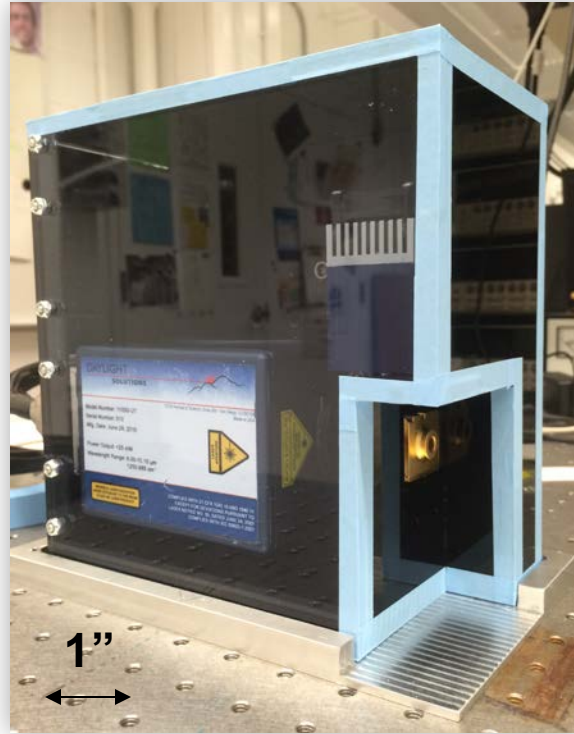
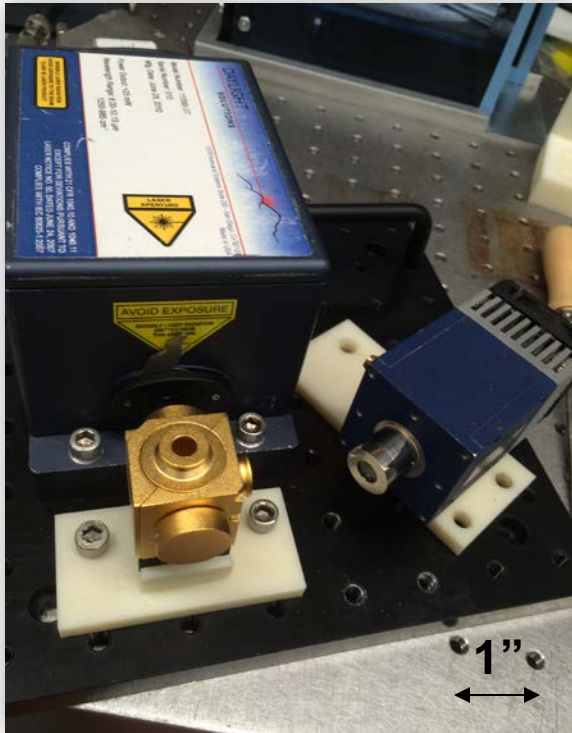
Results

- 216 data points: **70% accuracy** with old ML models
 - New ML models: on average, **78.8% accuracy**
 - All averages/medians are **within $\pm 20\%$ error** (definition of **clinical accuracy**)
- 64 new data points
 - Best performing model: Random Forest* (**60% accuracy; median 12% error**)
 - New vs. Old: **faster performance** (new models run within 5 seconds vs. 1 hour)



Future Steps

Clinical study: San Diego, now until September (~800 more data points)



Visit poster #34 to learn more!