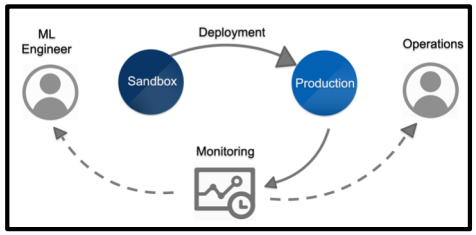
MPP: Model Performance Predictor

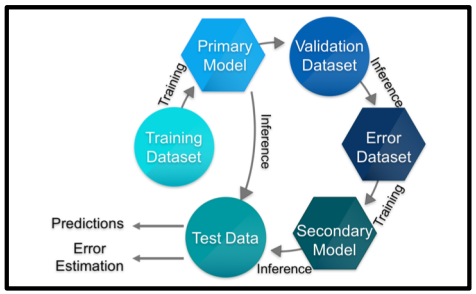
Sindhu Ghanta*, Sriram Subramanian, Lior Khermosh, Harshil Shah, Yakov Goldberg, Swaminathan Sundararaman, Drew Roselli, Nisha Talagala

*Work done at ParallelM

Agenda



Monitoring production models

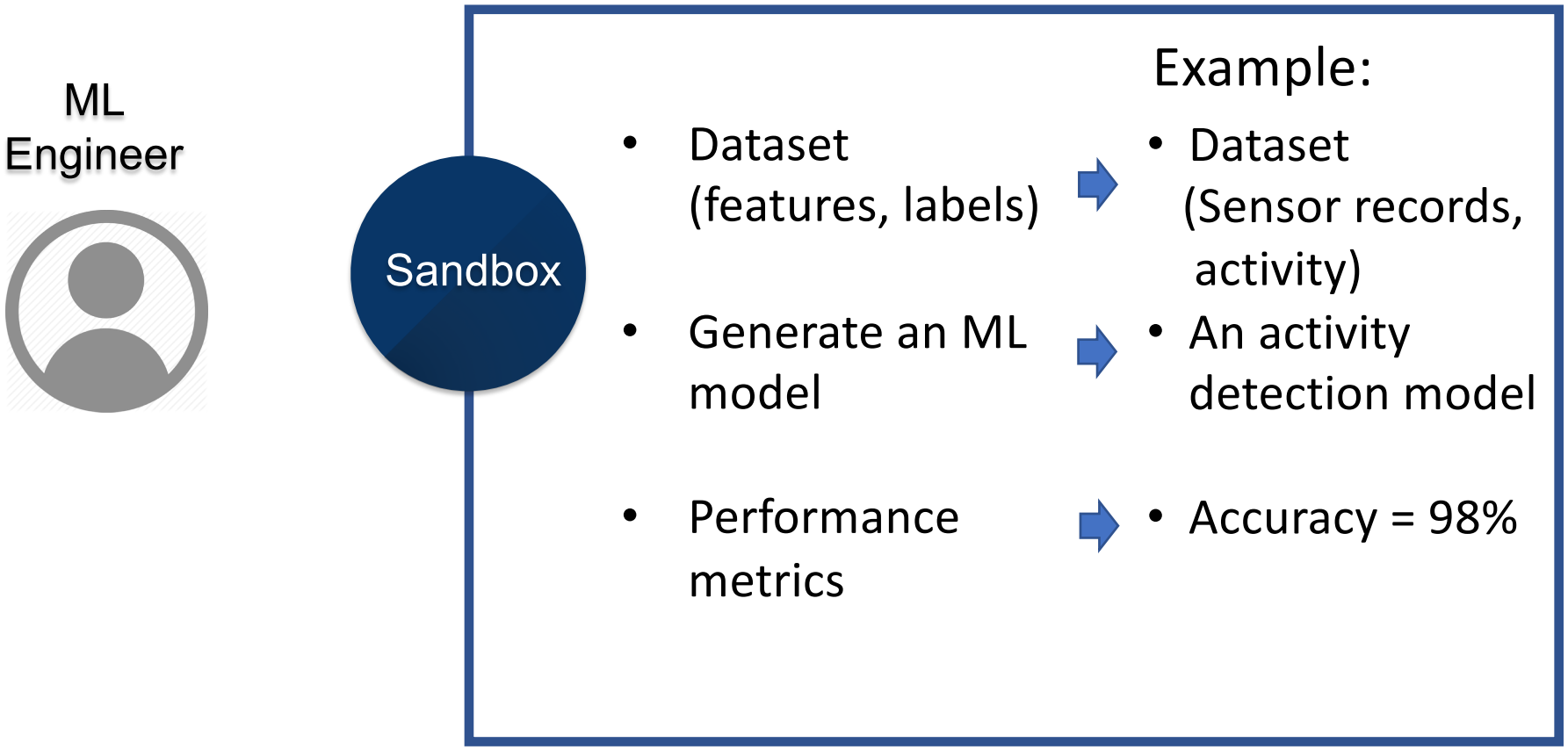


MPP for monitoring

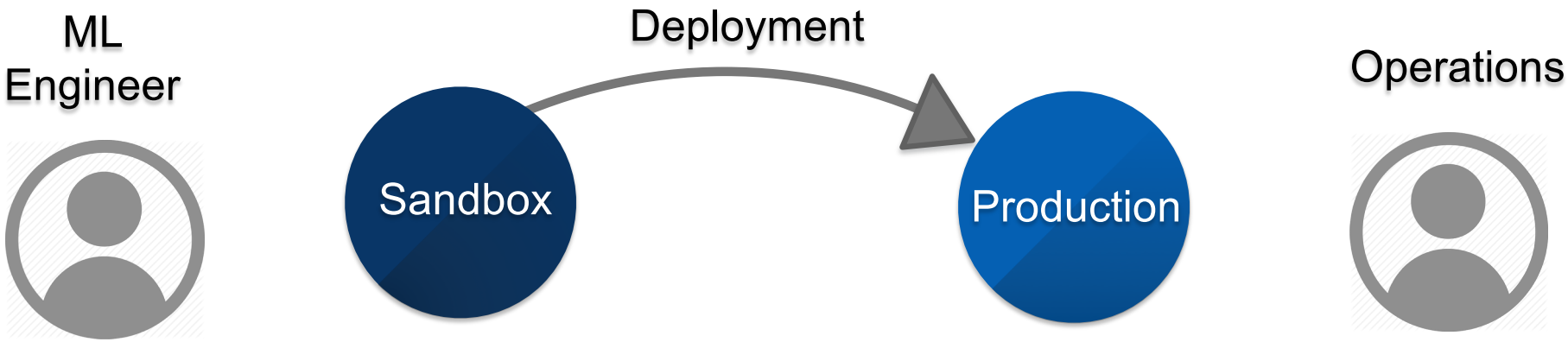
Dataset	Primary Algorithm Accuracy	MPP predicted Accuracy	Absolute difference
Samsung	0.92	0.92	0
Yelp	0.95	0.95	0
Census	0.78	0.63	0.15
Forest	0.65	0.64	0.01
Letter	0.71	0.6	0.11

Results

Monitoring Production Models

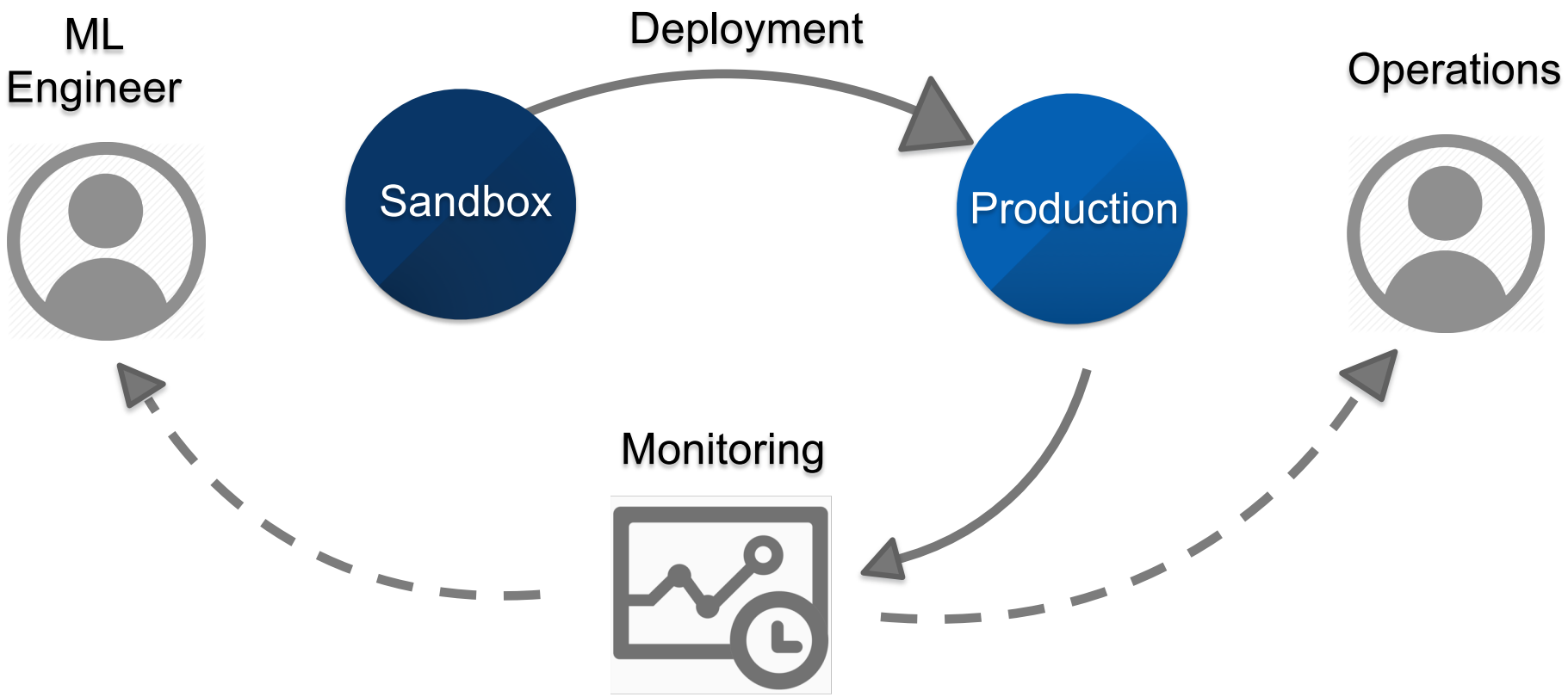


Monitoring Production Models

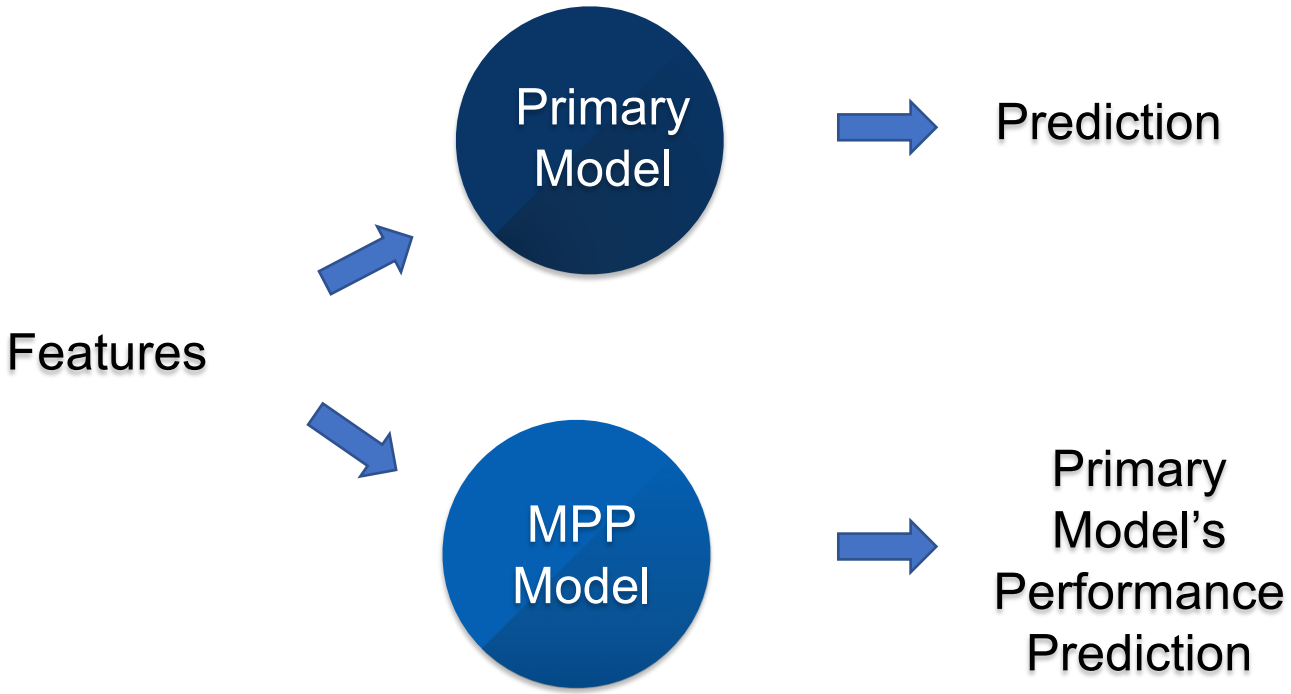


Assumption: The models training performance is indicative of its performance on production data

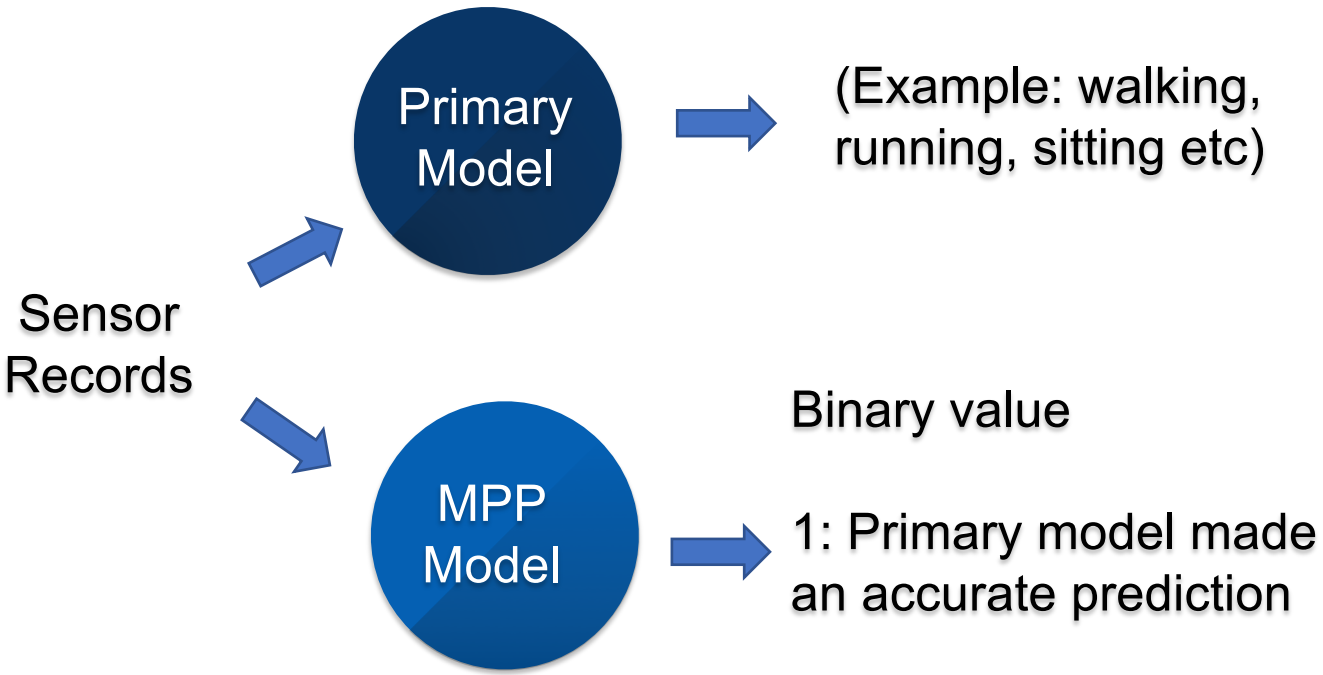
Monitoring Production Models



MPP for monitoring



MPP for monitoring

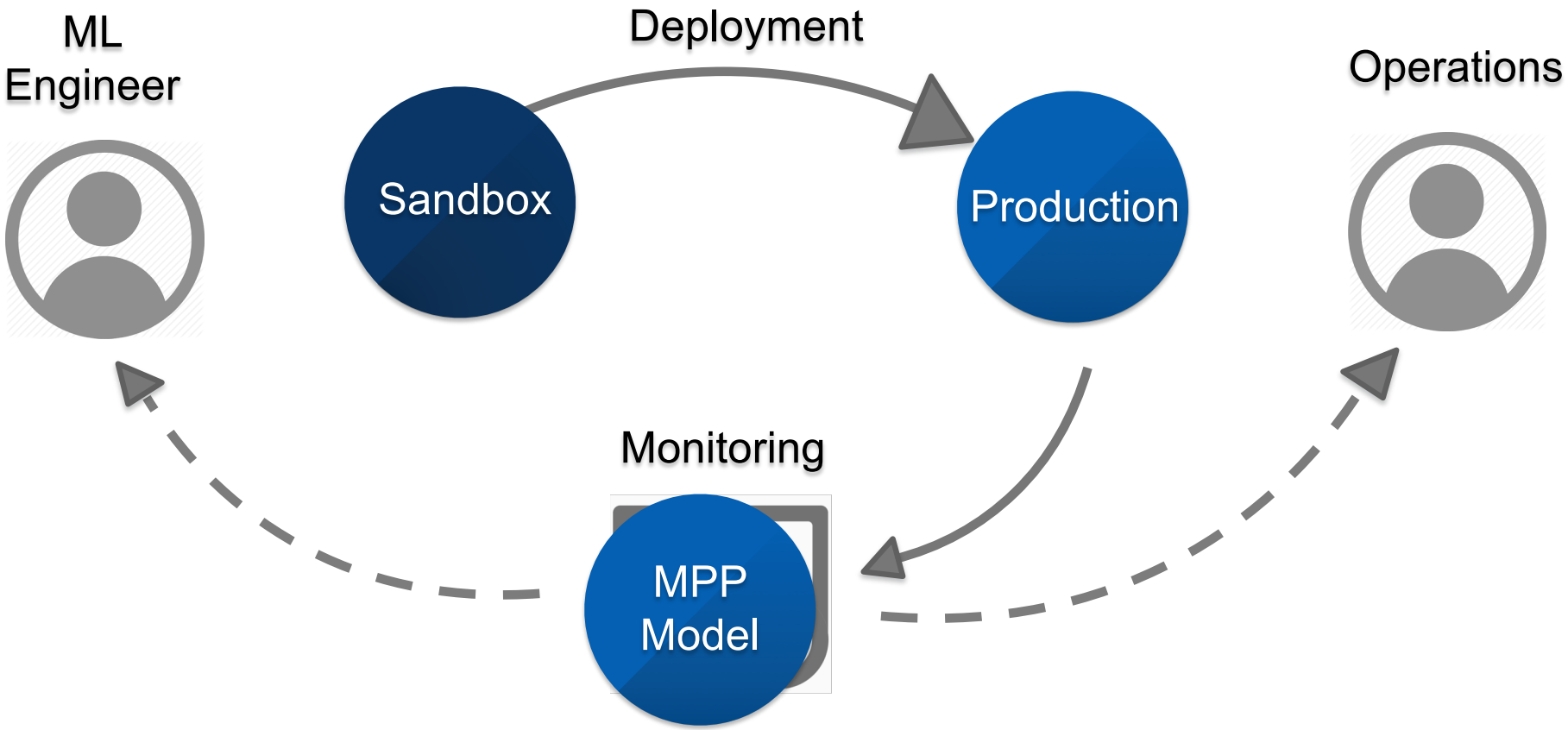


Training example:

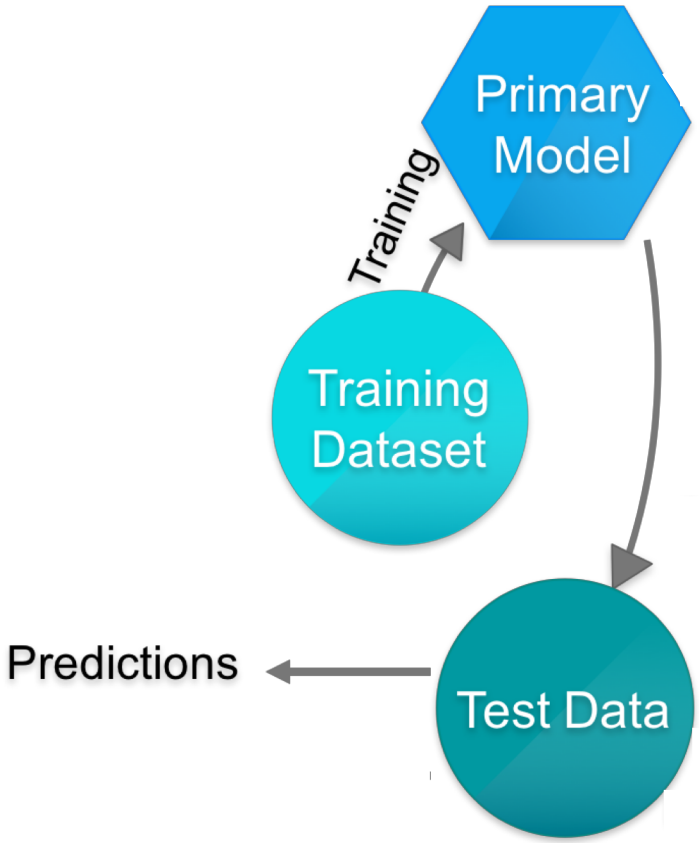
- Dataset (Sensor records, activity)
- An activity detection model

- Accuracy = 98%

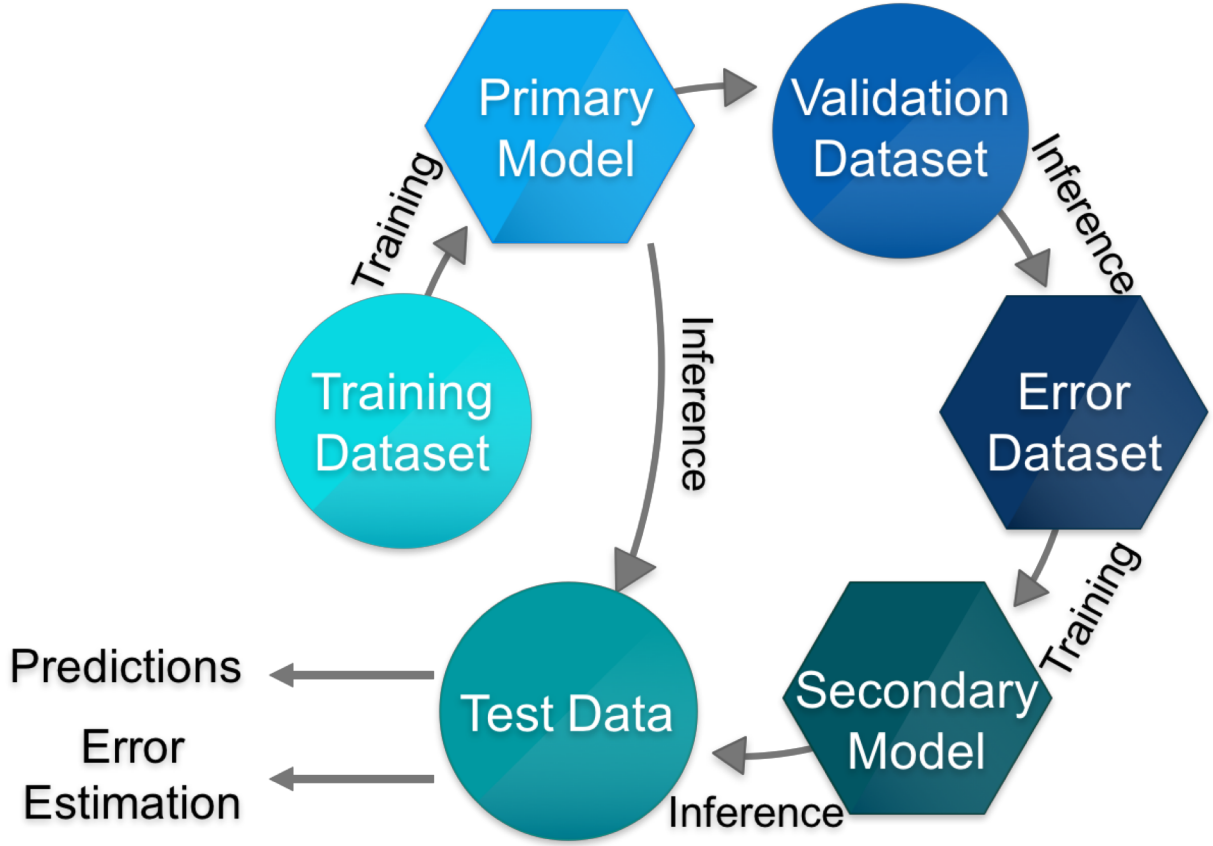
MPP for monitoring



How to create a MPP model



How to create a MPP model

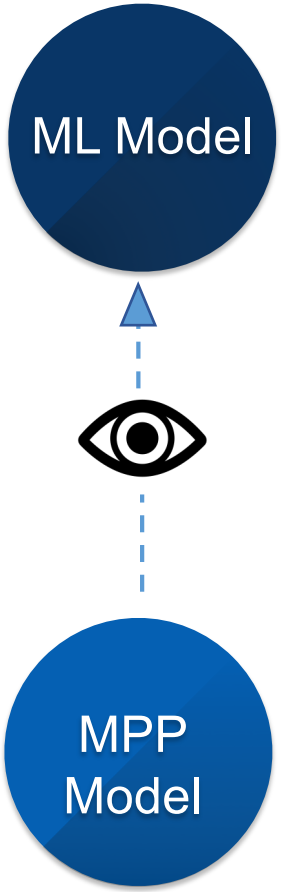


Results

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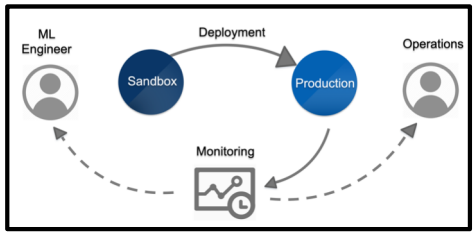
All datasets are publicly available in UCI repository

ML model to monitor an ML model?

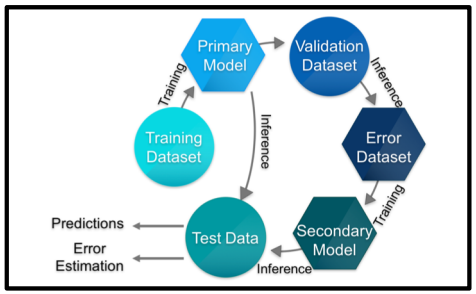


Who monitors MPP's performance?

Questions ?



Monitoring production models



MPP for monitoring

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Results