



Gain a Competitive Edge with Yield & Quality Optimization

Challenge

- Key product line represents ~\$100M revenue/yr
- Market dominance relies on high quality product
- Currently discard 25% due to high standards
- Digital cameras used for inspection
- Process engineers still must manually inspect
 - Labor intensive
 - Error prone

Solution

- Process data captured
 - Per second temp. in each zone of process
 - Combined w/ manual reports from engineers
- Model production lifecycle with digital twin
 - Predict # of deformities
- Prescriptive optimizer minimizes defects
 - Optimizes temp. for specific properties
 - Enhance quality progressively with ML
- Engineers trained in AI/ML for diagnostics

Impact

- Every correct prediction saves product
 - Reduces waste
 - Improves yield and reduces costs
- Up to 50% of discards avoided
- \$8M-\$12M conservative savings estimate
 - ~\$1M Month
- Maintain extremely high quality standards

Problem type: Prescriptive optimization

Universal relevance: AI augmentation of institutional knowledge can improve both output AND quality. This kind of impact creates sustainable market dominance.