5 KEY TAKEAWAYS FROM THE WEBINAR

1. IMPACT OF ML ACROSS INDUSTRIES
   - Automotive: RPA, Computer Vision, Physical Robotics
   - CPG: Augmented & Virtual Reality, Sensors, Computer Vision
   - Hi Tech, Telecom: ML, NLP, Ethical Agents
   - Manufacturing: Industrial IoT, Consumer IoT
   - HealthCare: Computer Vision, NLP, ML, Sensor Analytics
   - Retail: ML, NLP, Virtual Agents
   - Manufacturing: Sensor Analytics, Forecasting
   - CPG: ML, Forecasting, Trend Prediction
   - Retail: Augmented & Virtual Reality, Sensors, Computer Vision
   - HealthCare: Computer Vision, NLP, ML, Sensor Analytics

2. WHAT DOES ML MODEL PRODUCTIONIZATION MEAN?
   - Model Serving (Providing API / Hosting)
   - Experimentation Framework
   - Monitoring Model Performance
   - Keeping Model up-to-date / Retraining
   - Understanding results Reporting / Dashboards to Business

3. CHALLENGES IN TAKING ML MODELS TO PRODUCTION
   - Versioning
   - Siloed datasets - disparate sources
   - Completeness - imputation, sufficiency, Not skewed
   - Need for Data Catalog and Data Dictionary
   - Governance, Security & Regulations
   - Unified view of Data - CEO to Data Scientists

   - Model Versioning - parameters and results
   - Data Sampling - Build and Test Dataset Avoid skews
   - Retrain - keep model up-to-date
   - Data Labeling - cost
   - Acquiring Compute Resources
   - Scale of Model Testing

4. GOING BEYOND MODEL DEPLOYMENT
   - Technology choices
   - APIs vs Bulk Workflow Automation
   - Coding practices - Dev / QA / Prod Environment
   - Schema Management

5. REAL WORLD USE CASE
   - MULTI-ARMED BANDIT (MAB)
     - Objective: Optimize profit & keep techs happy by personalising the right message, at the right time, to the right person, via email channel.
     - BEFORE:
       - One Variant One Audience (12 million customers)
     - AFTER:
       - Over 200 Variants Multiple Audience Segments
     - Reinforcement Learning
     - transaction lift 9%
     - Sales lift during MAB sprint 8%
     - Estimated lift annually $15-30M

6. CHALLENGES OVERCOME
   - Data Volume Required
   - Availability Across Branches/Branches
   - Simplifying Run Time Streamline Business Processes
   - Technical Complexity
   - Data Quality

About Sigmoid
Sigmoid is a Sequoia-backed Leading Data Solutions company with offices in India, USA and Peru. With over half a decade of experience in Open-Source and Cloud technologies, Sigmoid specializes in building innovative solutions in the Data Engineering and Data Science (AI and ML) areas. Sigmoid’s data engineers have enabled organisations transition across the different stages of engineering maturity to a full-fledged system with automated training, testing, logging and alerting mechanisms. They have deep expertise in working with data science teams right from data processing phase to model validation & measurement.

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