eLearning Analytics Solutions

Computer Vision Based Customized Solution
eLearning Analytics Solution

Overview
How it works?

Customized workflow as per client needs

Capture video feed from browser webcam
- Asynchronously identify faces with Sparshik’s proprietary algorithms and predict additional attributes for each face such as age, gender etc.
- Analyze log to determine other attendees in the same user session.
- Identify repeat users/parents/siblings (optional)
- Identify emotions associated with each user at different stages of the session

Process feed for predicting faces, features and emotions
- Capture closure of eyes, head position and other indicators across session (Stage 2)
- Calculate attention span with above attributes

Analyze data for predicting attention span
- Individual user behavior and attention spans across sessions can provide insight to create a further action plan
- Overall user behavior helps assess program reception and instructors

Act on Business Intelligence

System Workflow

Capture video feed from various user sessions and push them to our API at agreed frequency per sec (fps)
- Sparshik APIs will store frames and reply unique request id without any processing
- Sparshik will provide API Documentation for quick integration
Key System Features
Enterprise Friendly Solution

- **Robust Enterprise Architecture**
  - **Data Security**
    - We deploy applications in client specific closed cloud infrastructure, resulting in data protection
  - **Data Management**
    - We develop custom connectors to pull and push data from existing master data systems to avoid duplicate information
  - **Data Availability**
    - Our can deploy applications over multiple machines resulting in high data availability and disaster management

- **Seamless Integration & Response**
  - **Seamless Scalability**
    - We provide easy to use secure API deployed using dockers and containers, giving us capability to scale with client requirements.
  - **Optimized Bandwidth**
    - We can provide client side application to do basic processing such as identification of face, resulting in reduction of bandwidth
  - **Actionable Customized Reports**
    - We provide ready to use processed data that can be used to build business intelligence for critical decision making

- **Latest AI Solution**
  - **Large Scale Processing**
    - We utilize our fast proprietary AI algorithms to detect multiple faces in a frame and process data from large scale feeds – leading to quick availability of insights
  - **Predicted Attributes for Unknowns**
    - We have models to predict information for unknown faces such as age, gender, posture, etc. for quick identification
Action Plan
Proposal for a successful implementation

Stage 0
• Capture feeds from 1-2 classes with average 30-50 users as a proof of concept
• Process data to predict number of faces, age, gender and emotions
• Use existing capabilities to show the business case

Stage 1
• Capture feeds from 50-60 concurrent classes with average 500-1000 users
• Develop custom APIs and models to achieve needed insights and accuracy
• Dedicated infrastructure deployments and development to achieve needed numbers at the time of commercialization

Stage 2
• Capture data similar or more than as in stage 1
• Analyze and process data to predict attention span of various users during sessions using advanced Deep Learning algorithms (over and above Stage 1 deliverables)
Few Key Assignments

Using Face Analytics

Facial Analytics for Insurance Industry
- Predict age, gender and lifestyle habits
- Detect frauds and reduce policy issuance time

Emergency Response System for a leading Oil Major
- Accurately identify employees within various facilities
- Provide real-time critical intelligence

Employee Productivity Analysis for a leading start-up
- Generate a comprehensive view of time spent by employees in office
- Provide clear action plans on individuals

Targeted Marketing for retail garment industry
- Market products based on customer age, gender, attire and other attributes in a store
Our Management Team
40+ years of experience in Industrial product development

Navendu Agarwal
CEO & Founder
BS & MS IIT Bombay
Serial Entrepreneur

Ankita Jain
VP Industrial Solutions
BS Mechanical Engineering
Ex Infosys and Caterpillar

Sanjay Bhandari
VP Digital Assistant Solutions
BS IIT Bombay
Ex Oracle
Our Trusted Partners

*Integrating our innovations for global solutions*

- Publicis Groupe
- thesocialclinic
- PivotRoots
- Tarento
- Sodel
- Pangolin Capital