

Scope for the POC forming part of Technical evaluation of RFP for IDP– Scope B- Medical Document & Analytics

- 1) Demonstrate using your Demo application the following features and the solution capabilities using a set of documents provided by SBI Life.
- 2) Document Ingestion
 - a. to accept two documents as input
 - b. to accept a compound document (PDF with more than one document contained in same or different pages)
- 1) Image Pre-processing & classification of the following documents
 - a. Proposal Form
 - b. KYC Documents
 - Aadhaar
 - PAN
 - Voter ID Card
 - Passport
 - Driving License
 - c. Lab Test Reports
 - d. Physical Medical Examination Report (MER)
 - Template 1 – Handwritten responses in a structured form
 - Template 2 – Printed responses in a structured form
 - e. Cardiology test reports
 - ECG
 - TMT
 - f. Radiology test reports
 - CT Scan
 - MRI
 - X Ray
 - g. Medical Prescriptions
 - h. Hospital Treatment / discharge Summary
- 2) Extraction, Validation, Capture and tagging of data from Lab Test Reports
 - a. Identify alternate names for tests and collate values against standard test names
 - b. Convert test values to standardized units specified for each test
 - c. Tag each value
 - With a confidence score to indicate accuracy of OCR/ICR
 - With a “Standard”, “High” or “Low” flag with reference to the range for the given test in the lab test report
 - d. Provide a reference to the source image or file (document name and page number) against each test value read
- 3) Extraction, Validation, Capture & tagging of data from Medical Examination Report
 - a. Extract the responses against questions
 - Responses given as either Yes / No (if printed MER); or
 - Responses given as “Tick” against respective checkbox

- b. Extract detailed comments, if any, given against responses or at the end and tag as indicated in section “xx”
 - c. Provide output as a JSON with Question Number, Response & Remarks corresponding to the question
 - Use Medical NLP models/libraries and question number for context and to improve accuracy
- 4) Extraction & Validation of identity information from KYC Documents
 - a. Type of Document
 - b. ID Number
 - c. Name on the document
 - d. Date of Birth / Year of Birth (if available)
 - e. % Match with name as per Medical Report

Provide Output as labelled data in a HTML Page
- 5) Extraction & tagging of information from Prescriptions / Hospital treatment summaries
 - a. Identify & tag the following entities
 - Hospital Name & address
 - Patient Name & Address
 - Patient ID / Registration Number
 - Medical Conditions (with ICD Code if feasible)
 - Medical Procedures
 - Drugs & medicines
 - Name
 - Dosage
 - Frequency
- 6) Face Detection & Verification
 - a. Identify Human Faces from ID Proof and Photograph contained in the medical reports
 - b. Match face with that in proposal form
- 7) Populate a checklist and indicate the presence or absence of a value for a specific test in the reports read against every test in the checklist. Checklist to be shown as per the table below

Test Group & Test Name	Source Doc Name & Page Ref	Value	Confidence Score	Reference Range	Value Flag
Category A					
CBC					
- WBC					
- WBC Differential					
o Neut					
o Lymph					
o Mono					
o Eos					
o Baso					
- RBC					
- Hgb					
- HCT					




- MCV					
- MCH					
- MCHC					
- RDW					
- Platelet Count					
- Mean Platelet Vol					
ESR					
Lipid Profile					
- LDL					
- VLDL					
- HDL					
- Triglycerides					
- Total Cholesterol					
- Cholesterol : HDL ratio					
- LDL : HDL ratio					
Category B					
LFT					
- GGTP					
- SGOT					
- SGPT					
- ALK Phosphatase					
- Bilirubin					
o Direct					
o Indirect					
o Total					
- Protein					
o Total Protein					
o Serum Albumin					
o Serun Globulin					
o A/G Ratio					
- HbsAg					
RFT					
- Serum Creatinine					
- Uric Acid					
- BUN					
Category C					
FBS					
RUA					
- Volume					
- Appearance					
o Color					
o Transparency					
- PH					
- Specific Gravity					
- Chemical Analysis					
o Protein					
o Albumin					

○ Glucose					
○ Bile Salt					
○ Bile Pigment					
- Microscopic analysis					
○ RBC					
○ Pus Cells					
○ Epithelial cells					
○ Casts					
○ Crystals					
○ Bacteria					
○ Ketone Bodies					
○ Nitrate					
○ Urobilinogen					
○ Others					
- Urine Cotinine					
Category D					
- HIV					
Others					
- HbA1c					
- PSA					
- Nicotine					
- ECG					
- TMT					
- USG					

8) Output of MER Report

Proposal No		
Name		
Gender / Age / DOB		
Date & Place		
Doctor Name		
TPA Name		
Question	Response	Remarks
Part 1		
1		
2		
3		
4		
...		
Part 2		
Physical Measurements HT / WT / Chest-E/Chest-I/Abd		
Blood Pressure & Pulse Sys / Diastole / Pulse		
1		
2		
3		
...		

9) Identity Verification

Reference Face from proposal		
Source	Photo	Match Score and/or confidence score
ID Proof given at medical <<ID Proof Type>>		Xx%
Photograph taken at medical		Xx%

Parameters to Showcase through POC

1	Accuracy of classification of medical & KYC documents
2	Accuracy of data extracted – Medical & KYC - Printed Text - Handwritten Text
3	Accuracy of identification & tagging of named entities
4	Creation of summary sheet & grouping of tests as per SBIL grouping
5	Human Face detection & extraction
6	Facial & Name match accuracy