

Pediatric OT Report Generator: Developer Brief

Client: Fushia Crooms, FMRC Health Group

Purpose: Automate the generation of pediatric OT evaluation reports using AI to extract data directly from uploaded PDFs. Output must match the clinical tone, detail, and structure of the Master Report 6:4 example.

High-Level Workflow

1. **User uploads PDF files**
 2. **AI extracts all necessary data (demographics, scores, notes)**
 3. **AI calculates chronological age**
 4. **AI interprets scores in detailed clinical narrative**
 5. **AI generates the final report text**
 6. **Output is written into a structured Google Doc**
 7. **Email notification is sent to user with the Doc link**
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Functional Requirements

1. PDF Upload Intake

- Upload portal should accept multiple PDFs per case (Facesheet, Bayley-4, SP2, ChOMPS, PediEAT, Notes)
- Accept both native PDFs and scanned documents (OCR-ready)
- Uploaded files are stored securely for AI processing

2. AI-Based Extraction and Processing

- Extract fields:
 - Child's Full Name, DOB, Parent/Guardian, UCI#, Sex, Language, Date of Encounter
 - Clinical Notes in bullet-point format
 - Assessment score tables or summary blocks from standardized tools
- **Auto-calculate chronological age** using DOB and Date of Encounter

3. Bullet-to-Narrative Conversion

- AI must convert bullet-point observations (e.g., posture, behaviors, reactions) into professional narrative paragraphs using the user's tone

Example:

Input: - Overstuffed mouth - Gagged several times - Used both hands to self-feed

Output: > Child overstuffed his mouth several times and gagged in response to large bolus sizes. He used both hands during self-feeding, demonstrating independence with finger foods but limited oral control.

4. Score Interpretation (Detailed)

AI must interpret scores from the following assessments with rich clinical detail:

A. Bayley-4 - Report: Scaled Score, Age Equivalent, % Delay - Interpretation must: - Compare to chronological age - Include range classification (e.g., “extremely low”) - Link to observed functional limitations

B. SP2 - Explain Seeking, Avoiding, Sensitivity, Registration scores - Include real-world implications (e.g., grooming, play, feeding)

C. ChOMPS - Report domain-specific scores and levels of concern - Describe feeding risks: bolus control, gagging, food hoarding

D. PediEAT - Interpret elevated symptoms in Physiology, Processing, Mealtime Behavior, Selectivity - Identify safety and endurance concerns during meals

5. GPT Prompt Assembly

- Structured prompt sent to GPT-4 with all extracted fields
- AI instructed to fill in only highlighted sections (green/yellow)
- Must replicate tone and language of Master Report 6:4

6. Output into Google Docs

- Use Google Docs API to create a new document for each child
- Report must use a standardized FMRC Health template
- Output includes:
 - Chronological age
 - Rewritten test observations
 - Detailed interpretations
 - Summary, goals, and recommendations

7. Email Notification

- Once report is ready, system emails Fushia at **fushia.crooms@gmail.com**
- Include child name and Google Docs link

Tech Stack Suggestions

Task	Tools
PDF Parsing	PDF.co, Docparser, Amazon Textract, Azure Form Recognizer
AI Language	Azure OpenAI (HIPAA) or OpenAI GPT-4 API

Task	Tools
Automation	Python (Flask/FastAPI), Power Automate, or Zapier
Output	Google Docs API
Notification	Gmail API, Zapier, or Google Apps Script
Hosting	Azure Functions, AWS Lambda, or Google Cloud Run

Security

- Use HIPAA-compliant storage and processing (Azure preferred)
 - Ensure no PHI is sent to non-compliant APIs
 - Maintain audit logs of uploaded files and report generations
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End of Developer Brief

Prepared for: Fushia Crooms

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