Curait Medical

CURAIT COMPLAI: RT Data Curator

CURAIT COMPLAI is a powerful automated clinical data curation platform designed to intercept, analyze, and validate Radiotherapy Structure Sets (RTSTRUCTs) prior to clinical workflow integration or registry export. Its web-based application design makes deployment across an institutional intranet simple and secure.

Automated Data Ingestion & Triage

- Direct DICOM Integration: Built-in C-STORE SCP listener receives data directly from your Treatment Planning System (TPS).
- Intelligent Network Bouncer: Automatically detects and rejects duplicate incoming network pushes to protect server disk space.
- Automated Batch Processing: Bulk-scans incoming queues to instantly auto-approve 100% compliant plans and flag exceptions for review.

Intelligent TG-263 Nomenclature & Protocol Validation

- Regex-Powered Standardization: Enforces strict naming conventions using customizable, dynamic Regular Expressions.
- Protocol Auto-Detection: Automatically predicts the intended clinical protocol by analyzing the extracted structures.
- Dose & Fractionation Capture: Extracts prescribed dose levels from target names to validate against expected protocol schemes.
- Mandatory Anatomy Enforcement: Cross-references contoured anatomy against clinical templates to ensure no required structures are missing.

Effort Score

- Proprietary Geometric Scoring: The Effort Score estimates the spatial and morphological complexity of each structure in the plan of a given structure set and protocol in terms of time for review.
- Surrogate: Models the difficulty of contouring and review of contours
- Dynamic Shape Modifiers: Applies exponential complexity penalties to highly irregular, non-spherical, or fragmented targets.
- Compound Overlap Penalties: Applies compounding difficulty modifiers for complex spatial overlaps and multi-dose gradient matching.

Clinical Governance & Architecture

- Tamper-Evident Audit Logging: Maintains a pristine, append-only JSON Lines (.jsonl) ledger of every clinical approval and override.
- Unified Search & Reporting: Seamlessly search the database and generate one-click compliance reports with visual charts and CSV exports.
- Database-Free Architecture: Stores all settings, templates, and logs as lightweight flat files, eliminating database lockups and corruption risks.
- In-App Template Editors: Allows authorized administrators to safely build, edit, and duplicate logic rulesets directly from the web UI.