Medical Coding Automation

FastAPI + Streamlit • ICD-10-CM suggestions with rationale highlights, negation handling, and billing-aware post-processing

- Suggests ICD-10-CM diagnosis codes from a clinical note.

- Explainable: highlights rationale spans in the note.

- Negation-aware (e.g., 'denies pneumonia' is suppressed).

- Billing-aware: maps non-billable parents → billable children (e.g., M54.5 → M54.50/51/59).

- Ops-minded: API key guard, Prometheus metrics, correlation IDs, tests + regression pack.

How it works + 90-second demo

Streamlit UI (screenshot)

Pipeline

- Sectionize note (Assessment/Plan ↑)

- Expand abbreviations (LBP→low back pain, HTN→hypertension)

- TF-IDF over enriched codebook (titles + synonyms + includes)

- Negation/assertion suppression (e.g., 'denies pneumonia')

- Post-process to billable child codes

- Return rationale spans + versions; export metrics

Demo steps

- 1) 'Low back pain, denies pneumonia.' → LBP; no J

- 2) 'Vertebrogenic low back pain.' → M54.51 (paren

- 3) 'HTN and T2DM, stable on meds.' → I10, E11.9

- 4) Show /docs and /metrics; download CSV