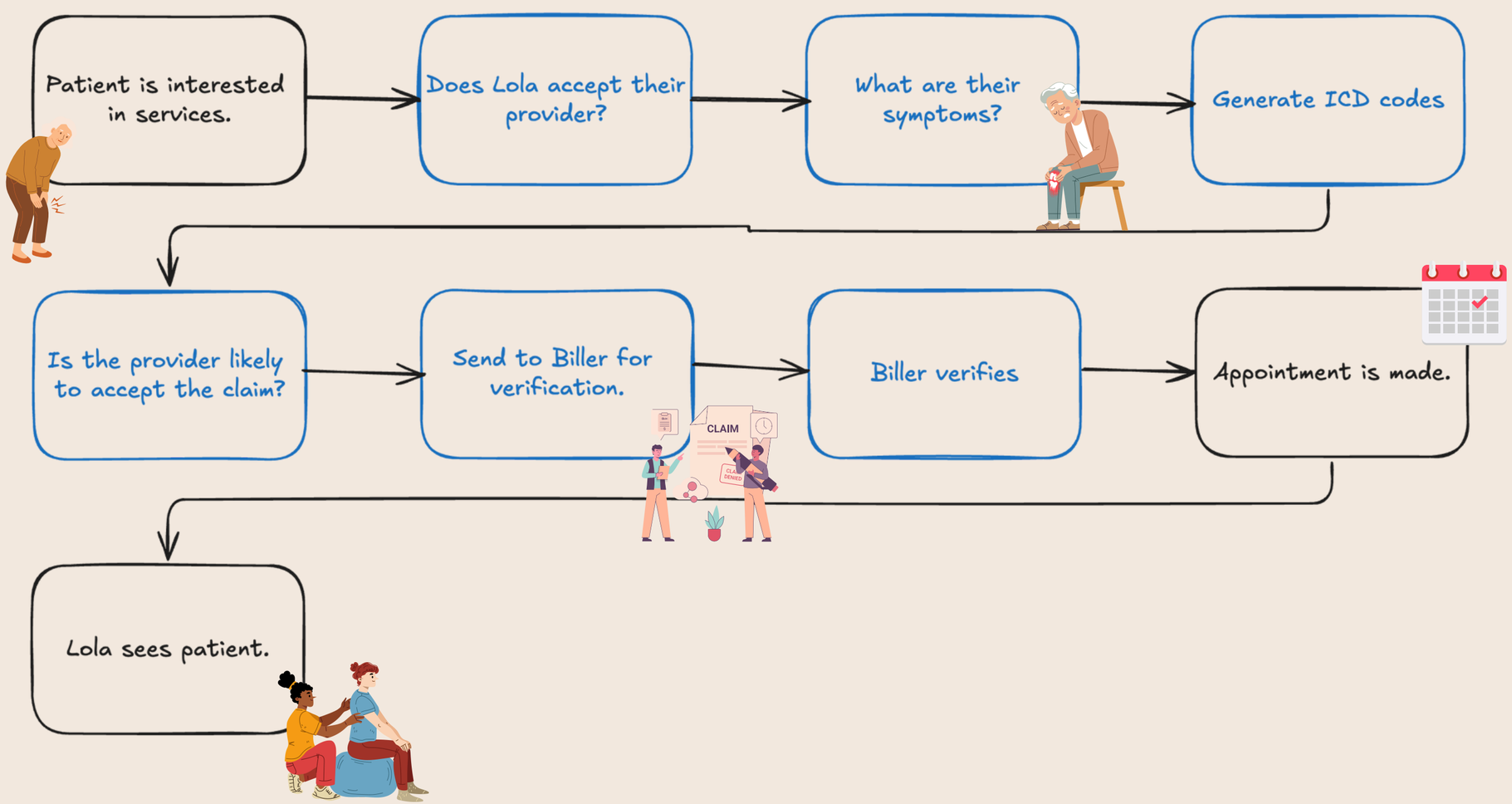
AI Empowered Patient Intake System

REINVENTING PHYSICAL THERAPY

Gene Lam, UPenn ‘24
Alan Mackiewicz, CUNY CSI ‘25
August 2024

HEALTHCARE IS INEFFICIENT

Insurance Verification



THE STATS

$125B per year in the US lost to medical billing errors. *Equifax*

80% of hospital bills contained an error. *Becker's Hospital Review*

30min average time to generate ICD-10 codes. *JMIR Med Inform*

OUR SOLUTION

A web application running on a custom-built server that streamlines the patient intake process.

- Automatically generate ICD codes from patient complaint.
- Send up-to-date information to medical biller for insurance verification.

KEY TECHNOLOGY: LLMS

Large-scale data transformation systems

Usage: text generation, answering questions, summarization, translation, image recognition

Accurate, Flexible, and Reliable

CHATGPT VS GEMINI VS CLAUDE

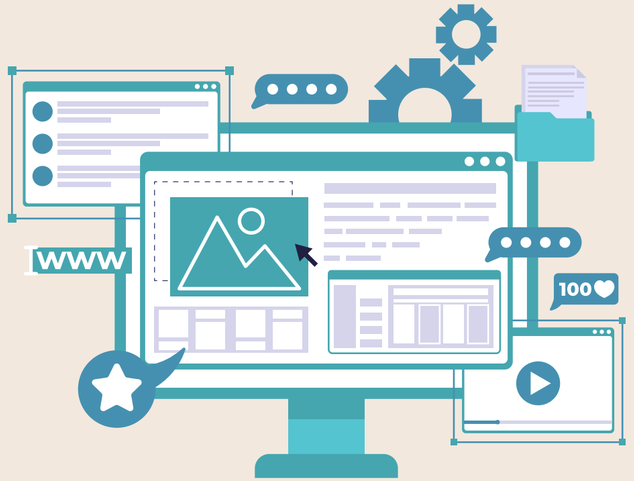
	ChatGPT 4o	Gemini 1.5 Pro	Claude 3.5 Sonnet
Price (per 1M tokens)	$20	$28	$18
HIPAA-compliant?	Yes, but slow process	Yes	Yes
Accuracy	High	Low	High

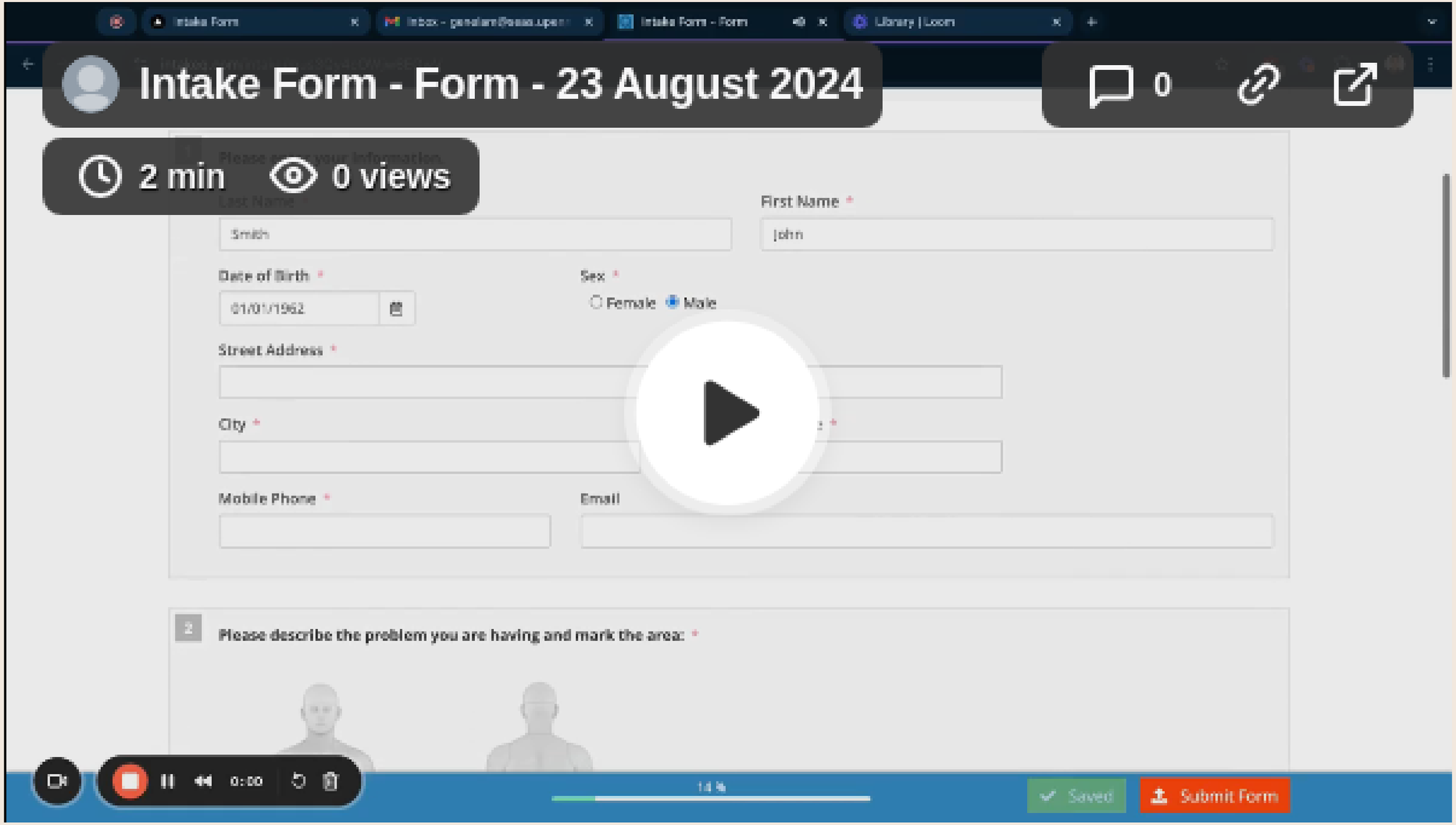
HOW IT WORKS

API’s

Server

Client




Intake Form - Form - 23 August 2024
0
2 min
0 views
First Name *
Smith
John
Date of Birth *
01/01/1962
Sex *
Female
Male
Street Address *
City *
Mobile Phone *
Email
2
Please describe the problem you are having and mark the area: *
0:00
14 %
Saved
Submit Form

THE RESULTS

80x more patients processed per month without performance degradation.

95% model accuracy.

75% reduction in ICD code generation time.

PRICING

IntakeQ	30.00
Claude Sonnet 3.5	5.00
Vercel Client	Free
Vercel Server	Free
AWS Database	~~20.00~~*
AWS Send Email Service	~~1.00~~*

	$35.00 / month

* AWS Startup credits

Thank you!

QUESTIONS?

Gene Lam genelam@seas.upenn.edu geneam2
Alan Mackiewicz alanmackiewicz03@gmail.com alanmackiewicz