Plan to calculate Rent vs. Buy (NPV / IRR)

Green is done

Blue in the process

Red is problem

#	Data Needed	Where to Get It (Live API)	Series / Endpoint Example	Why It's Required
1	Mortgage Interest Rate	FRED	MORTGAGE30US (30-yr fixed national)	To calculate monthly mortgage payment (PMT formula)
2	Home Purchase Price (today & forecast)	Zillow API replaced by FRED	ZHVI (Zillow Home Value Index) – All Homes or Single-Family	Starting price today + future appreciation path
3	Rent Price (today & forecast)	Zillow API	ZORI (Zillow Observed Rent Index) – All Homes or Multi-Family	FamilyMonthly rent cost in the "rent" scenario
4	Property Tax Rate	Hard-coded or NY State API (or FRED)	Use average 1.64% for NY (2024-2025)	Annual property tax = Price × 1.64% → monthly cost
5	Homeowners Insurance	Hard-coded average	~$1,400/year in NY (2025) → $117/month	Monthly cost in "buy" scenario

6	Maintenance / HOA	Hard-coded rule of thumb	1% of home value per year → monthly	Ongoing cost of owning
7	Investment Return if Renting	Polygon / Finnhub	VNQ (Vanguard Real Estate ETF) or SPY (S&P 500)	What your $250k down-payment would grow to if you rent & invest instead
8	Inflation / Discount Rate	FRED	CPIAUCSL (CPI) → ~2.5–3% long-term	To discount future cash flows to present value (NPV)
9	Closing Costs (one-time)	Hard-coded	~3% of purchase price (NY average)	Subtracted from buy scenario at month 0