DATA CHART ACCESSIBILITY

A WORD ABOUT ACCESSIBILITY

A table can be translated to Braille, but that's not always possible for charts.

Describing the features and emerging structures in a visualization is a possible solution... **if they can be spotted.**

Analysts must produce clear and meaningful visualizations, but they must also describe them and their features in a fashion that allows all to "see" the insights.

This requires them to have "seen" all the insights, which is not always necessarily the case (if at all possible).

A WORD ABOUT ACCESSIBILITY

Data Perception:

- texture-based representations
- text-to-speech
- sound/music
- odor-based or taste-based representations (?!?)

Sonifications:

- TRAPPIST Sounds : TRAPPIST-1 Planetary System Translated Directly Into Music
- Listening to data from the Large Hadron Collider, L. Asquith

A WORD ABOUT ACCESSIBILITY

Frank ↯ @FrankElavsky · 1h

Resources we could use more of (1/?):
Low vision (~30% of all people):
- High contrast text
- High contrast elements
- Using texture, shape, units
- Designing with zoom/magnification
- Using Hierarchy and Focus
- Using annotations or guides

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Resources we could use more of (2/?):
Functional/motor impairment (~13% of all people in US):
- Keyboard interactivity/navigation
- UI alternatives to in-chart controls (brushing, subselecting, etc)
- Alternative data navigation schemes
- Scrollytelling alternates

1 5 30

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Resources we could use more of (3/?):
Cognitive disability (~11% of all people in US):
- Captions, summaries, clear titles, and plain text alternatives
- Reducing visual complexity
- Forgivable user interactions
- Use of hierarchy
- Assistive design (how-to-read guides, help)

1 6 31

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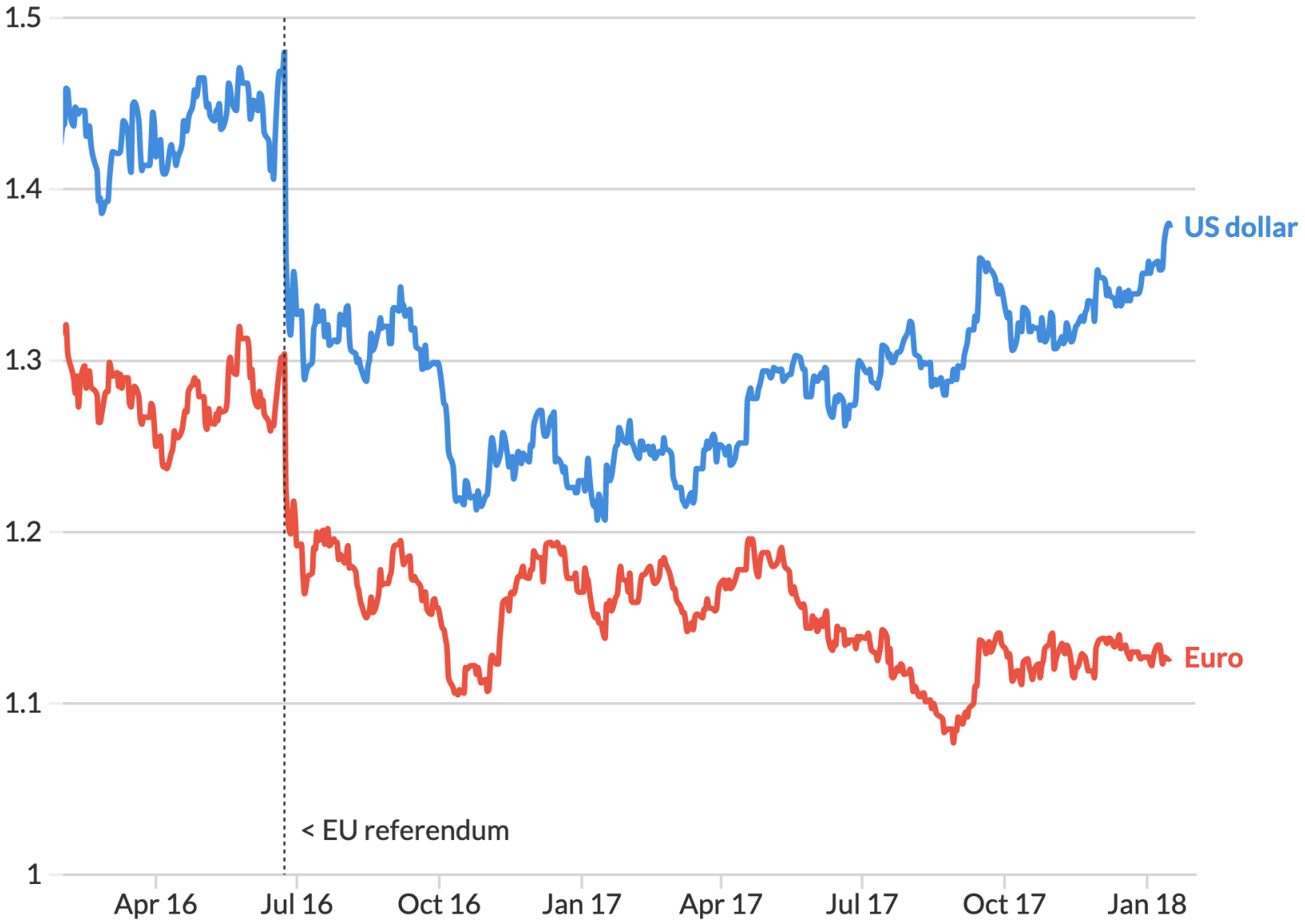
Resources we could use more of (4/?):
Attention deficit/hyperactive disorder (~9% of all people in US):
- Clear, short text summaries
- Object constancy
- Motion design and animation
- Use of breadcrumbs
- Interaction history (with undo/redo functions)

2 4 21

[https://flourish.studio/blog/accessible-chart-design]

The value of the pound has fallen, particularly since the EU referendum

Euros and US $ per £



A line chart showing the value of the pound in relation to euros and US dollars. A large drop is visible after the EU referendum in June 2016. Just before the referendum you could get 1.48 US dollars and 1.3 euros for each pound. After the referendum it fell to 1.29 US dollars and 1.16 euros – a fall of around 12%.

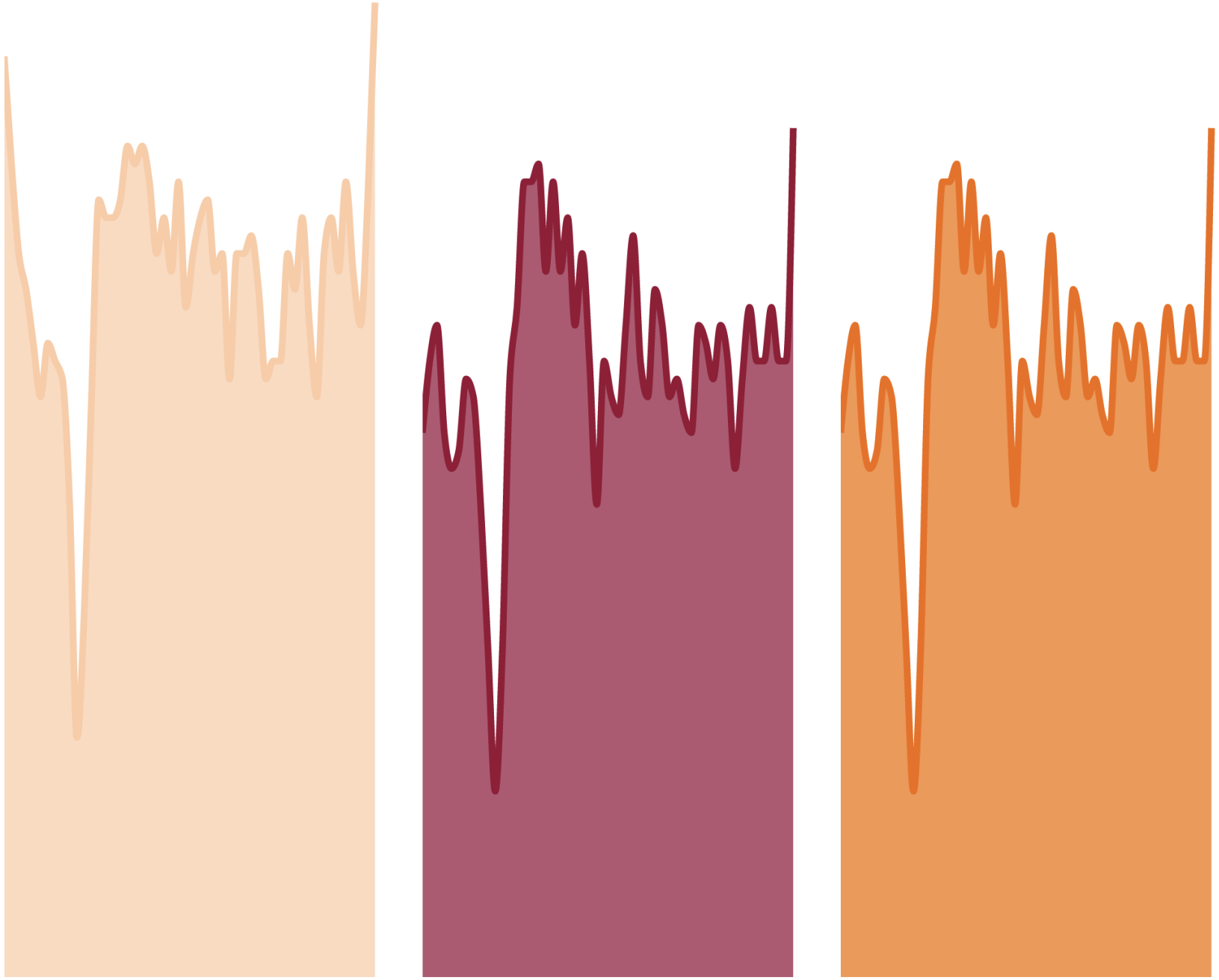
Source: Bank of England

Fail (1.46:1)

Pass (8.52:1)

Partial pass (3.02:1)

[https://flourish.studio/blog/accessible-chart-design]



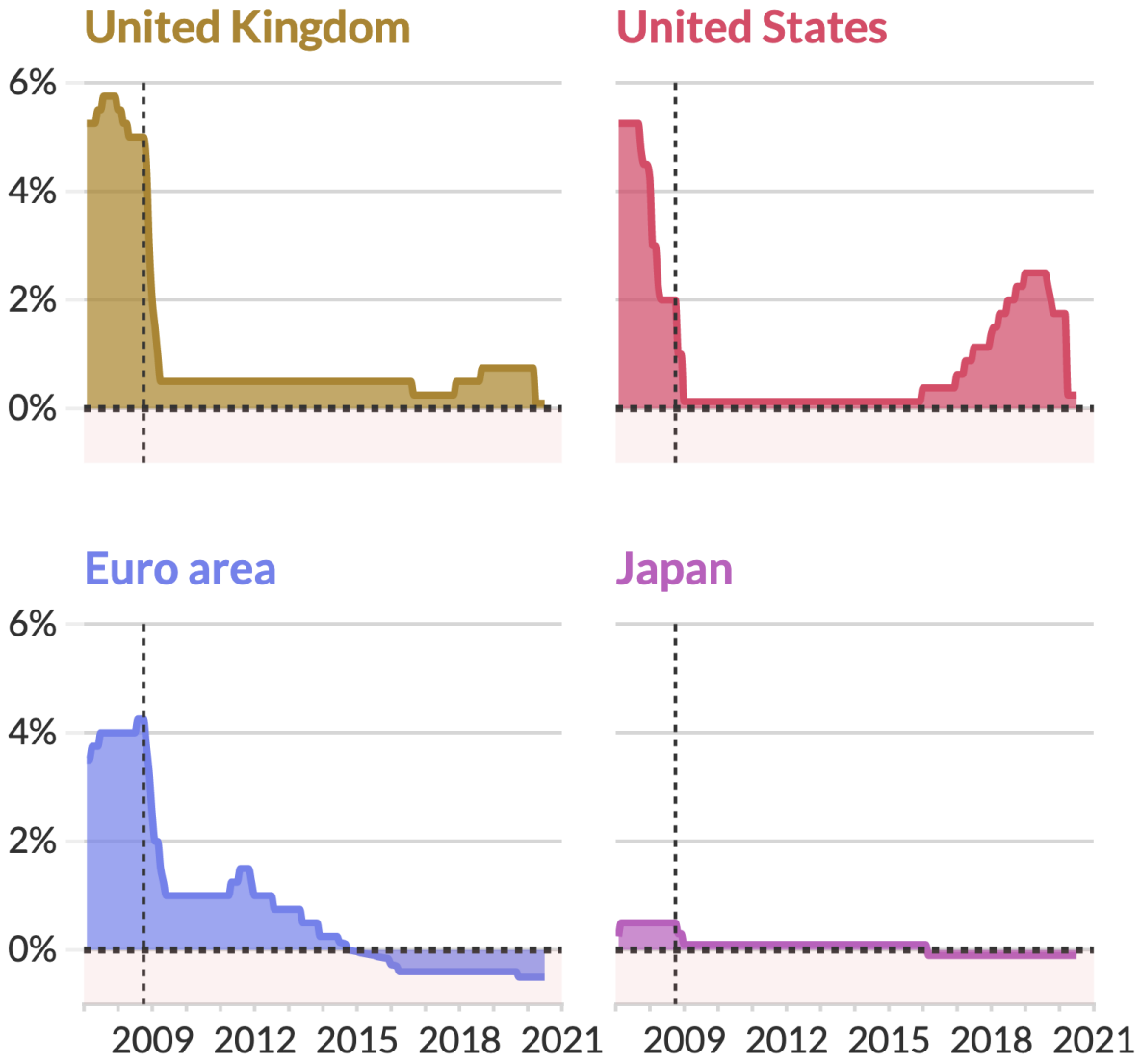
Use colors that are bold and clear enough for people to see both text and graphical elements.

Web Content Accessibility Guidelines (WCAG) suggest meeting the WCAG AA requirements.

To check if your color (and font size) choices are AA accessible you can use a contrast checker website.

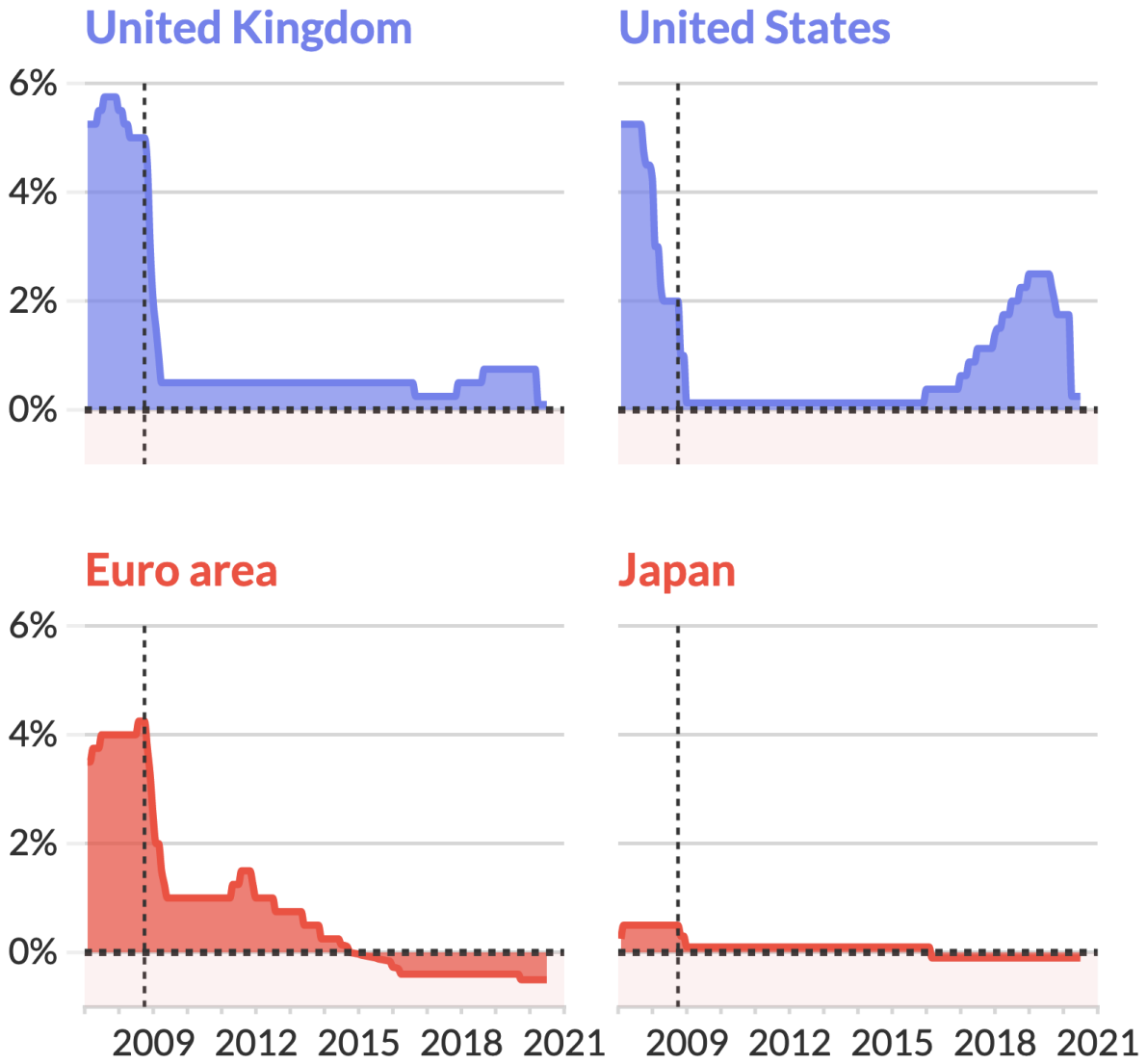
For colours to be AA accessible they need to have a contrast ratio of at least **3:1** for **graphical elements**, and **4.5:1** for **normal text**.

Interest rates have been falling since the financial crisis, and have even gone negative in some countries



Source: ONS

Interest rates have been falling since the financial crisis, and have even gone negative in some countries



Source: ONS

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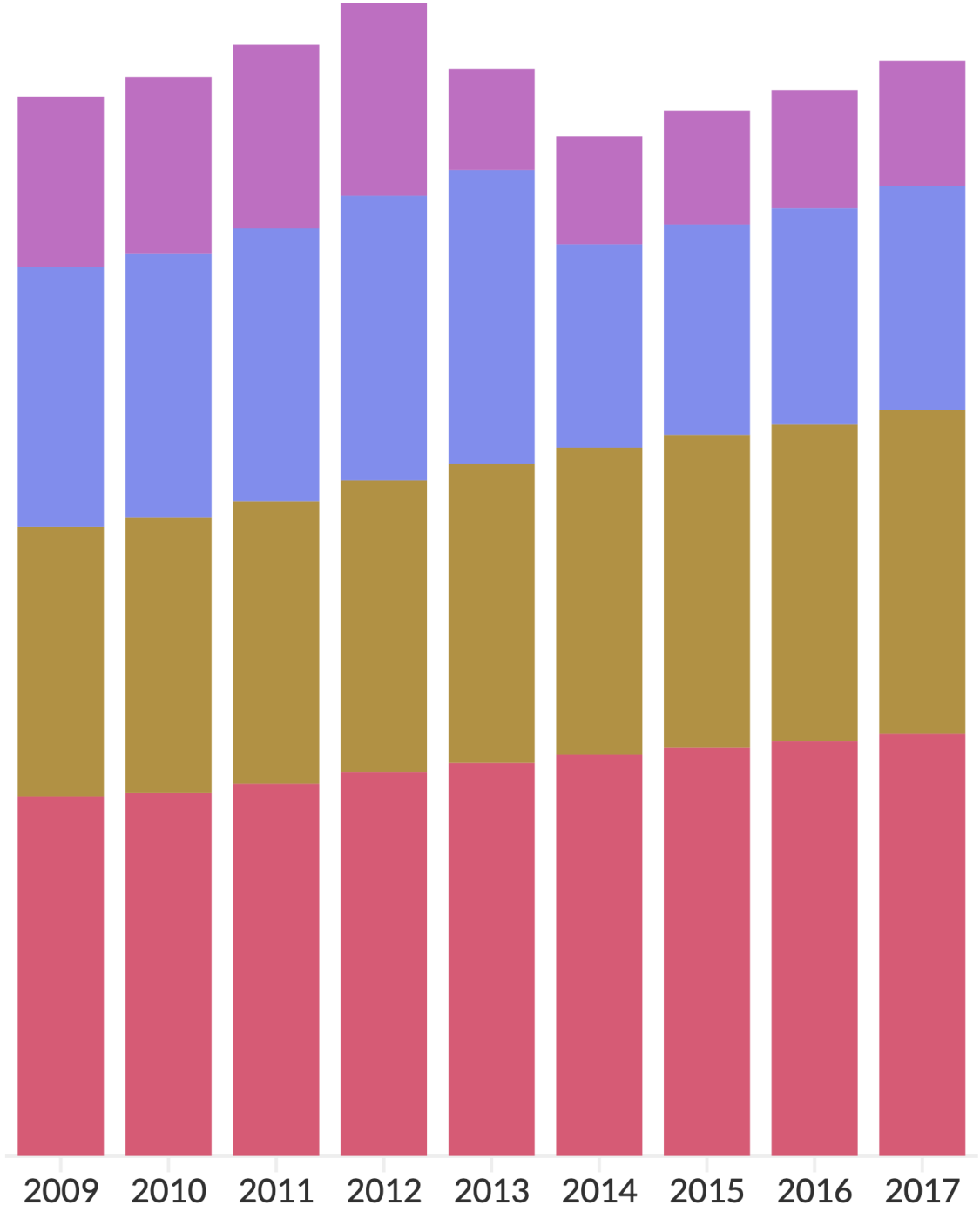

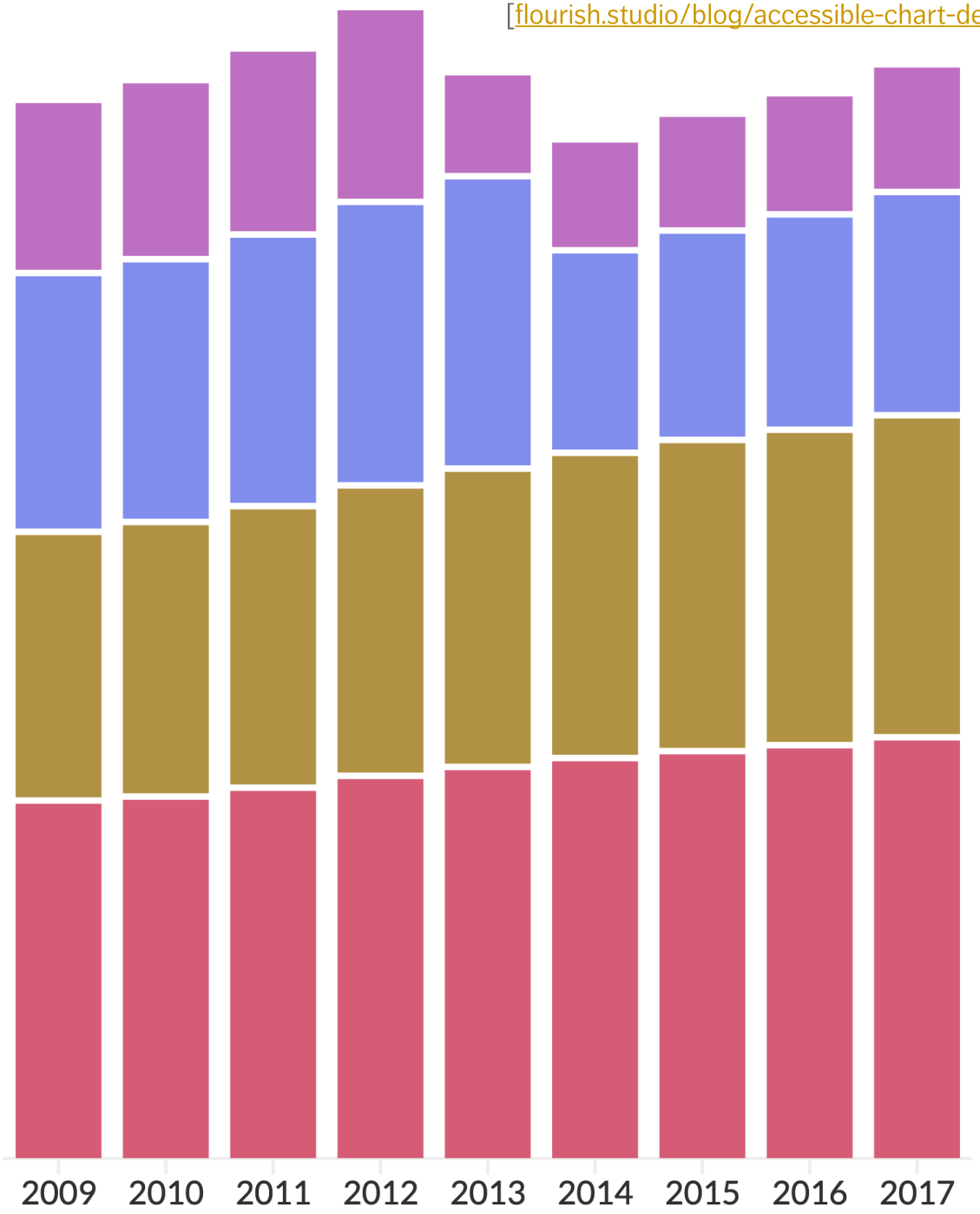

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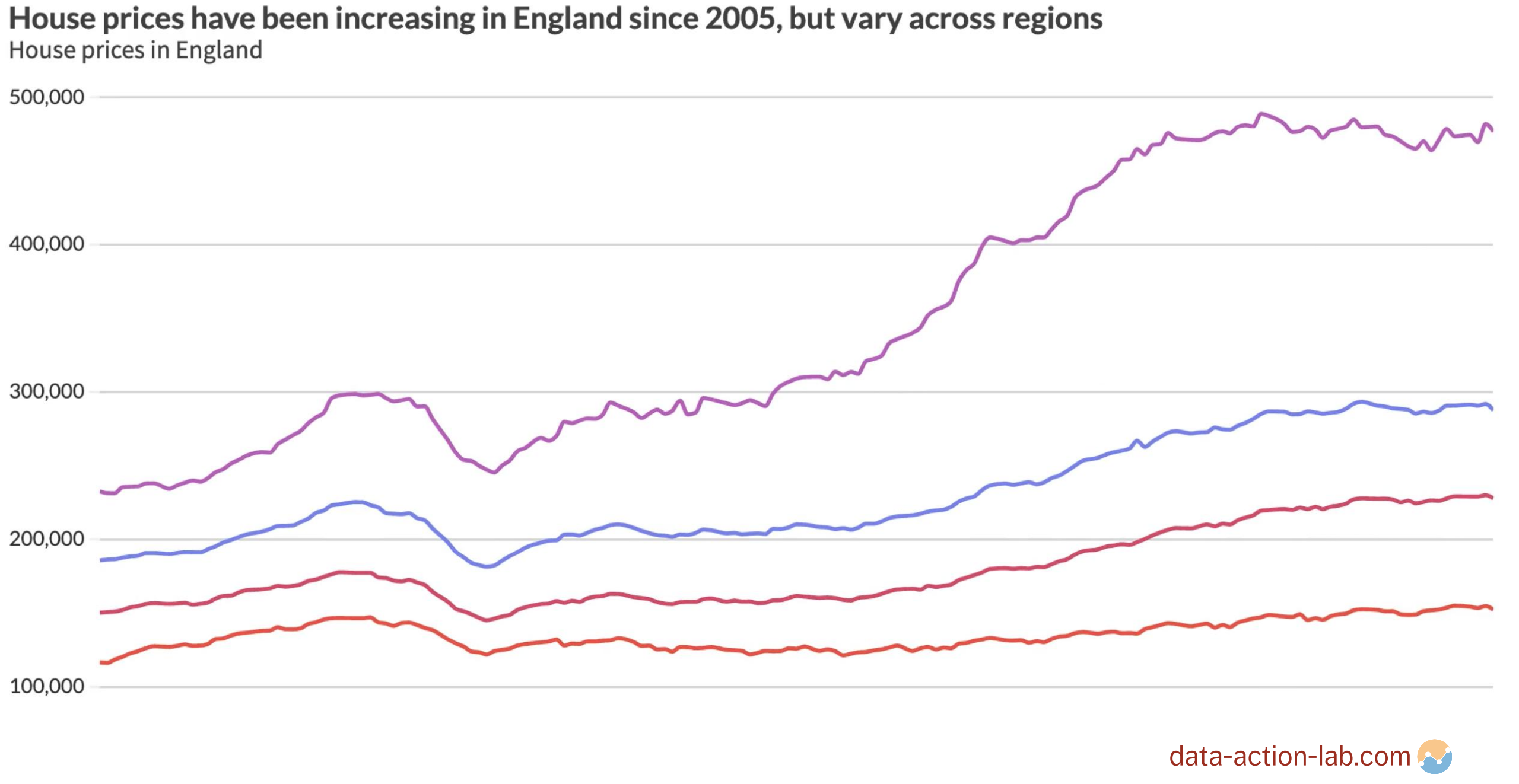

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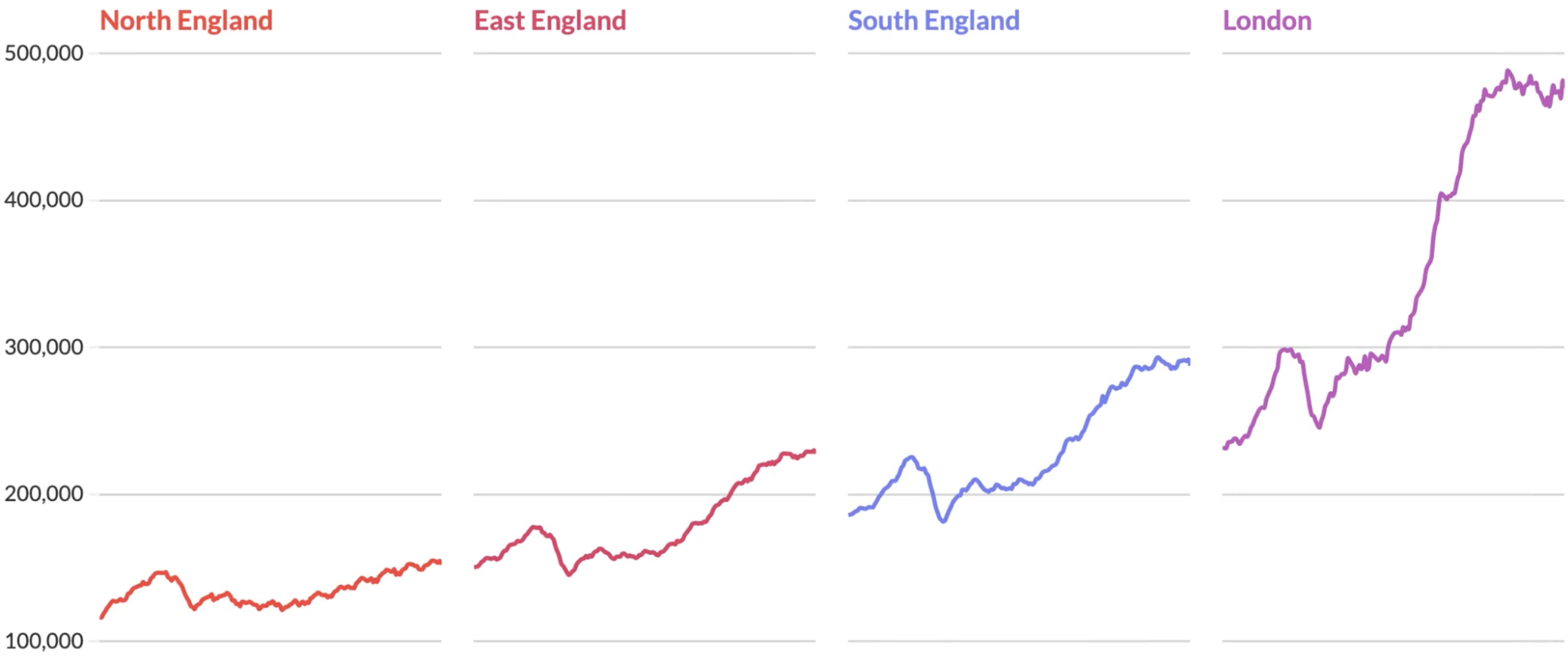
House prices have been increasing in England since 2005, but vary across regions

House prices in England



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