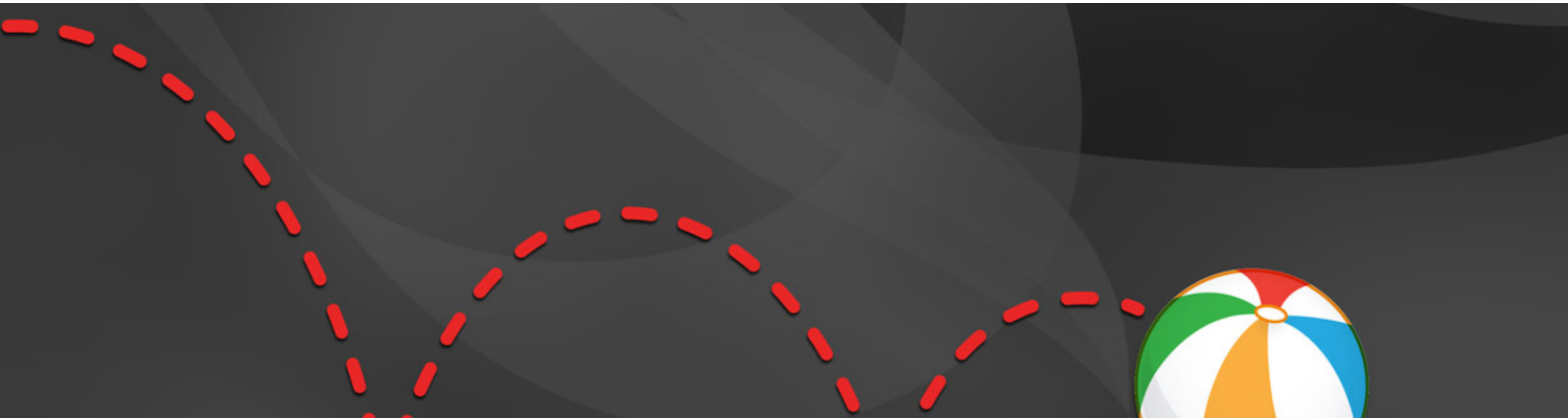
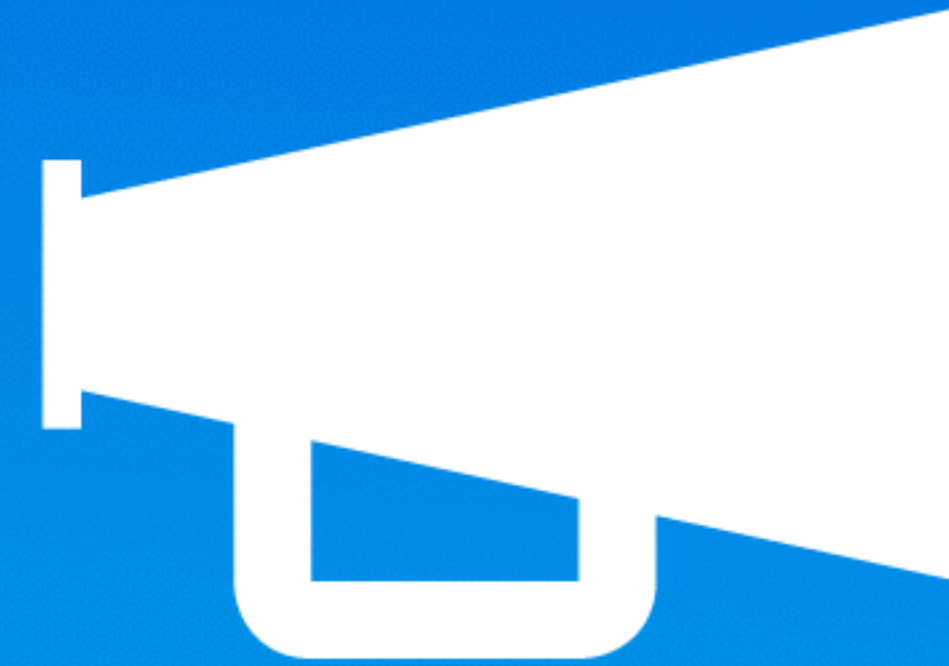
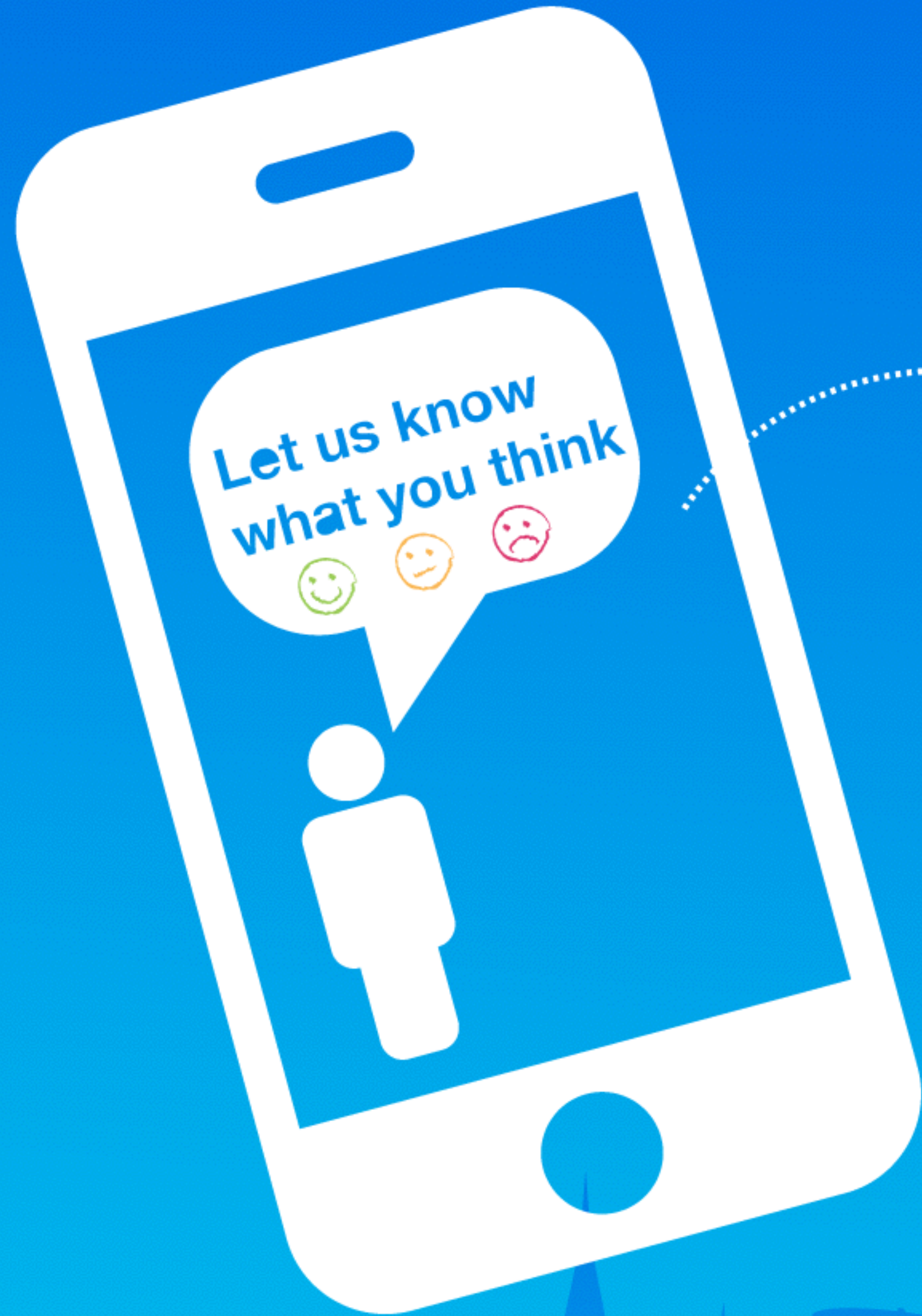


# Animations with *AL* (and stack views)

**Marin Todorov**





**Click 'engage'  
to rate sessions  
and ask questions**



Swift 2.0



Swift 2.0





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[Edit](#)

**Daniel Higgins Jr.**

home

(555) 478-7672



mobile

(408) 555-5270



home fax

(408) 555-3514



home

d-higgins@mac.com

home

332 Laguna Street  
Corte Madera CA 94925  
USA

Notes

Sister: Emily

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```
UIView.animateWithDuration(1.0, animations: {  
    redSquare.centerX = 200.0  
})
```

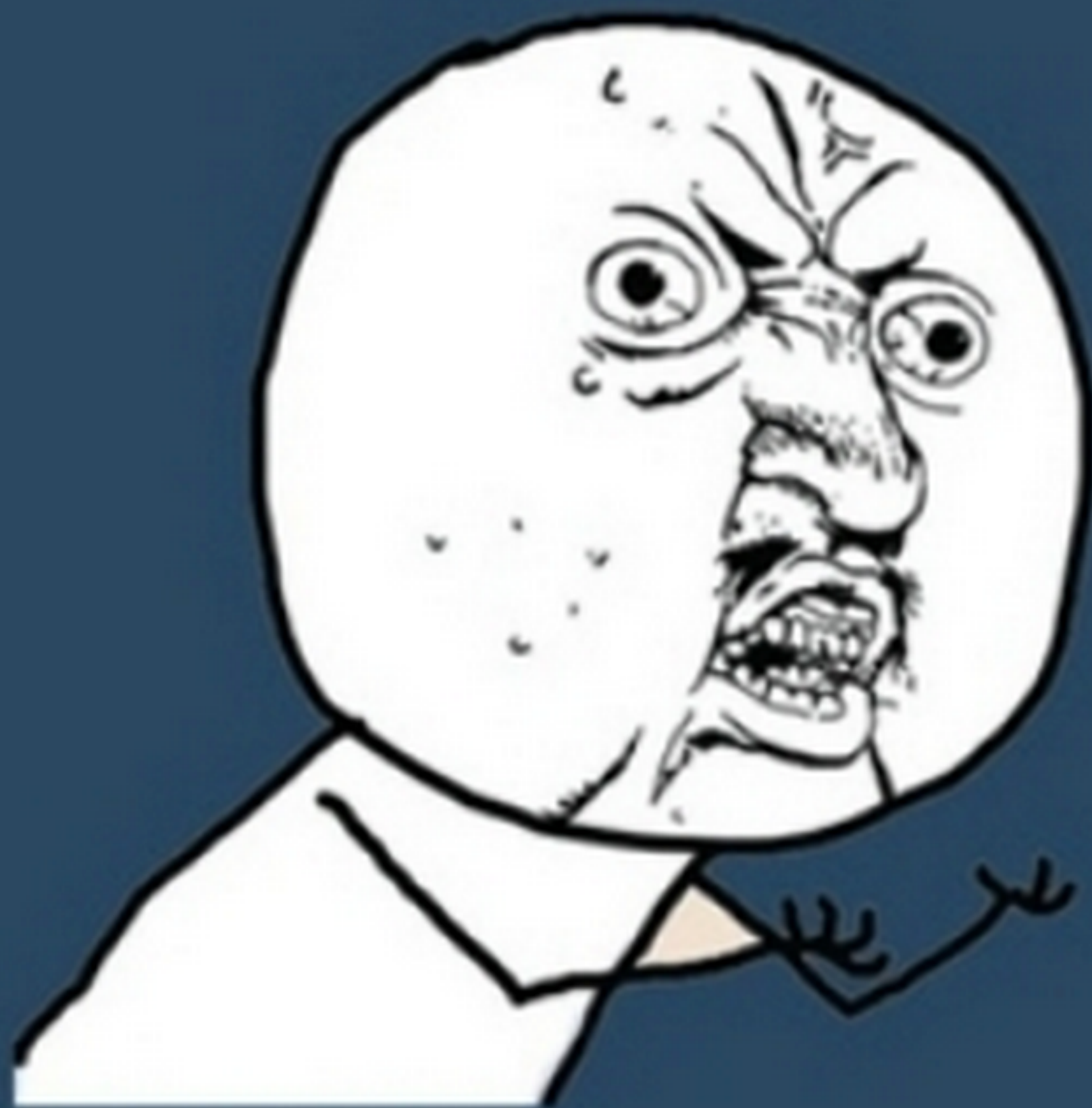
# Stack Overflow

Q: How to do this one animation thing in my app?

A: Include **Bloated.framework** by Super Awesome Ninja Dev  
and paste:  
`createANM().move().byX(20).byY(10).fadeWithTint().etc().etc()`

Q: Accepted! Works!

**ANIMATIONS**



**Y U NO WORK?**



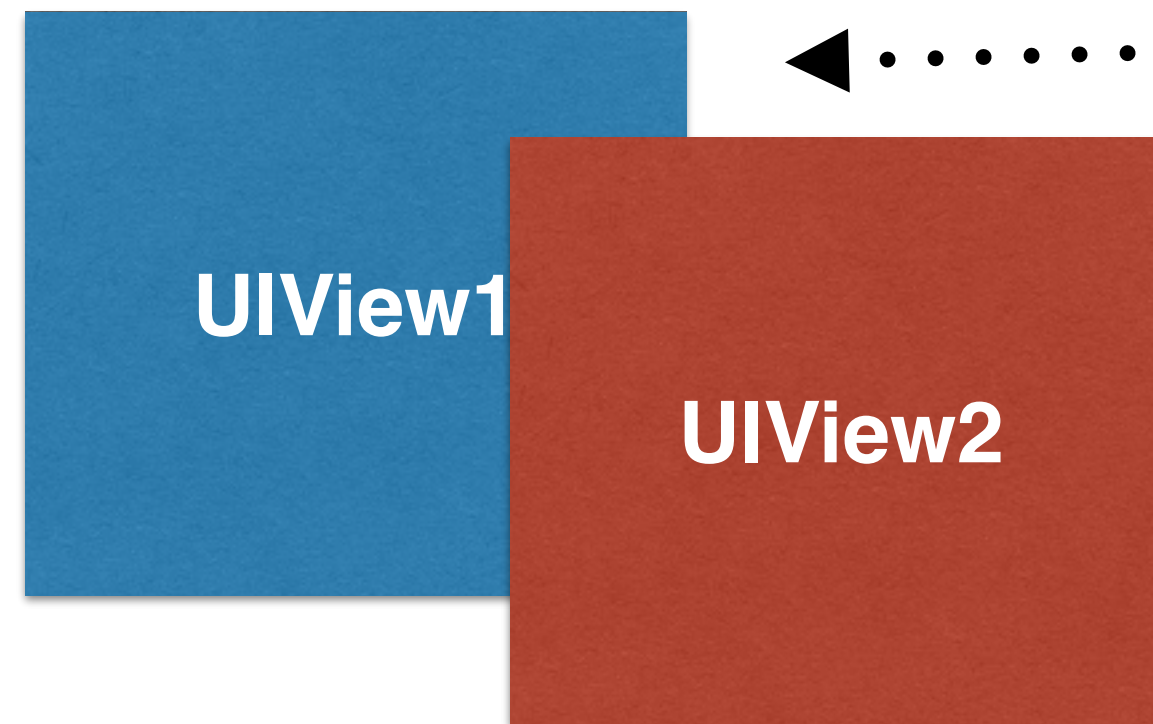
Demo...



# AutoLayout

Layout Hierarchy

- Constraint Width
- Constraint Height
- Constraint CenterX
- Constraint MarginY
- Constraint Ratio
- Constraint Height
- Constraint Vert. Space

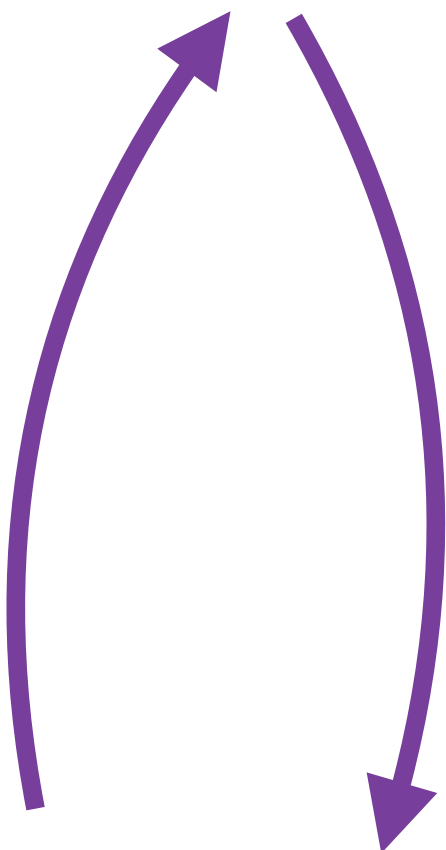


- UIView1.center
- UIView1.bounds
- UIView2.center
- UIView2.bounds

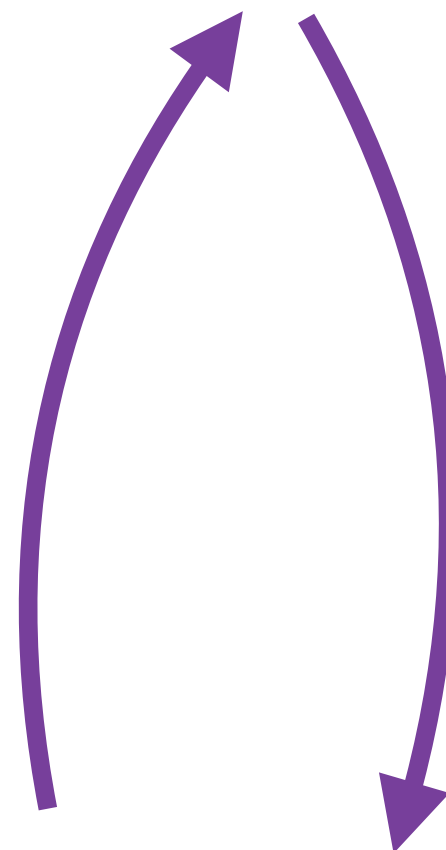
$$\text{UIView1.height} = \text{UIView2.height} * 0.5 + 100$$

# Internal & External changes

**AutoLayout**

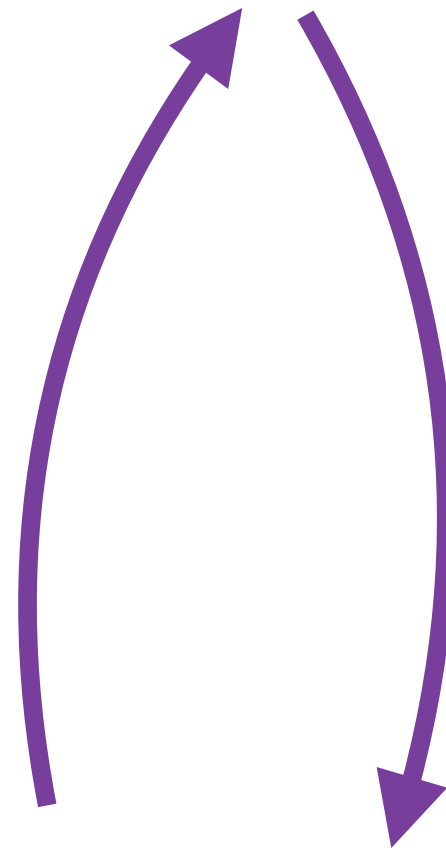


**AutoLayout**

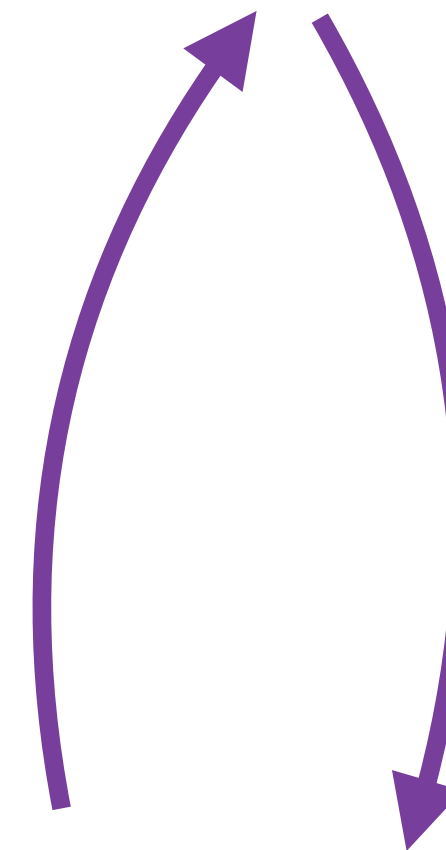


orientation  
change

**AutoLayout**



**AutoLayout**



change  
constraint



loadView()

keyboard  
pops up

VC popped

VC pushed

```
view.centerX += 10
```

```
UIView.animateWithDuration(1.0, animations: {
```

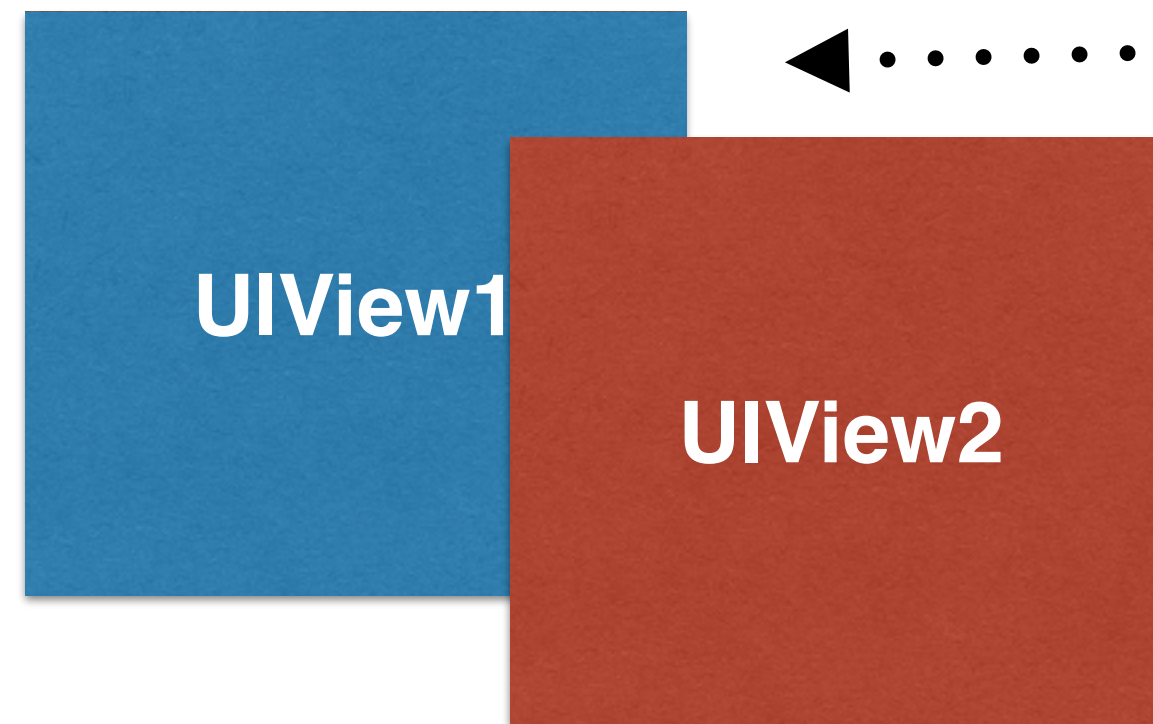
```
view.centerX -= 10
```

```
})
```

# AutoLayout

Layout Hierarchy

- Constraint Width
- Constraint Height
- Constraint CenterX
- Constraint MarginY
- Constraint Ratio
- Constraint Height
- Constraint Vert. Space



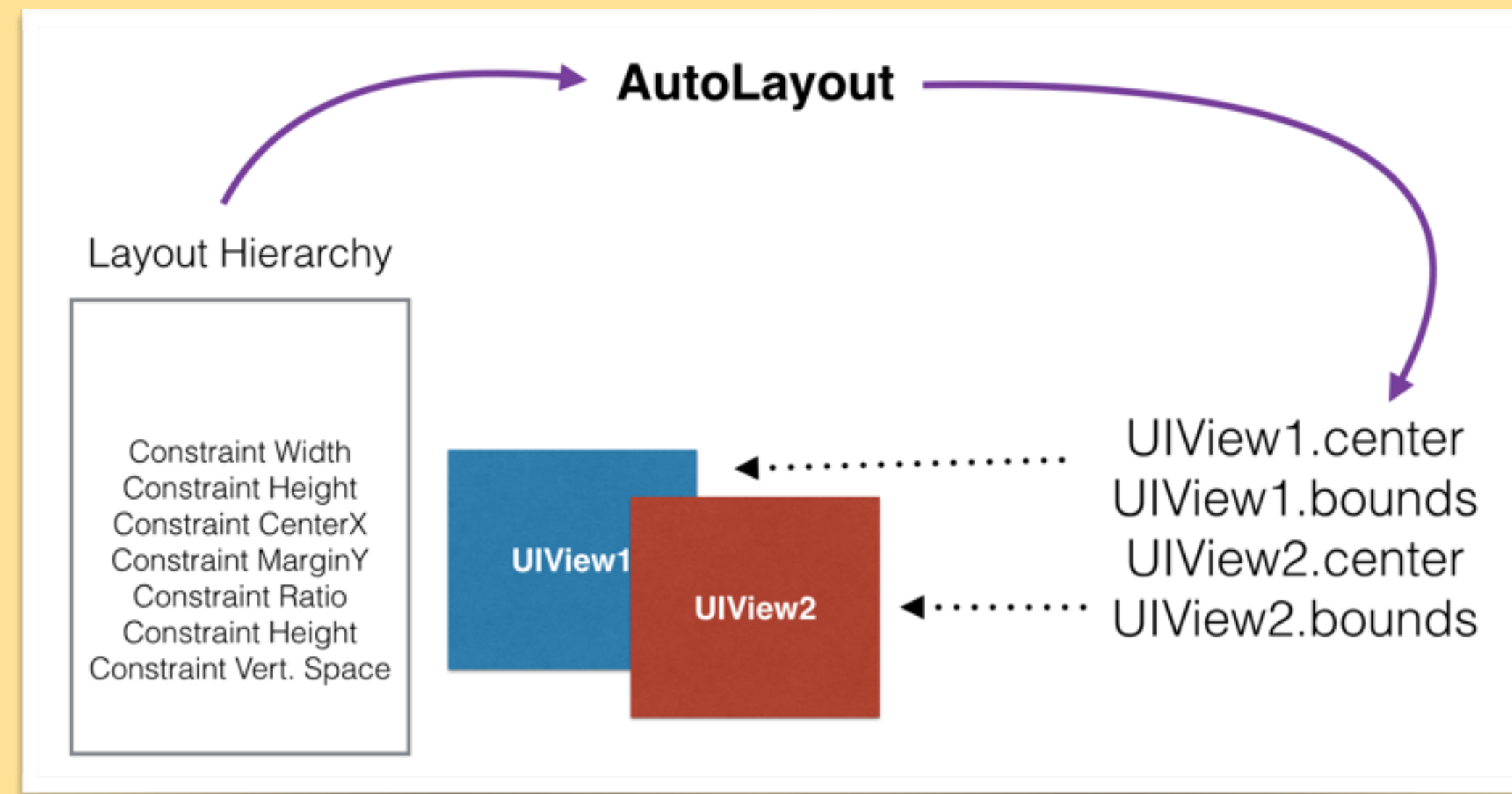
- UIView1.center
- UIView1.bounds
- UIView2.center
- UIView2.bounds

$$\text{UIView1.height} = \text{UIView2.height} * 0.5 + 100$$

... code to change constraints...

```
UIView.animateWithDuration(1.0, animations: {
```

```
layoutIfNeeded()
```

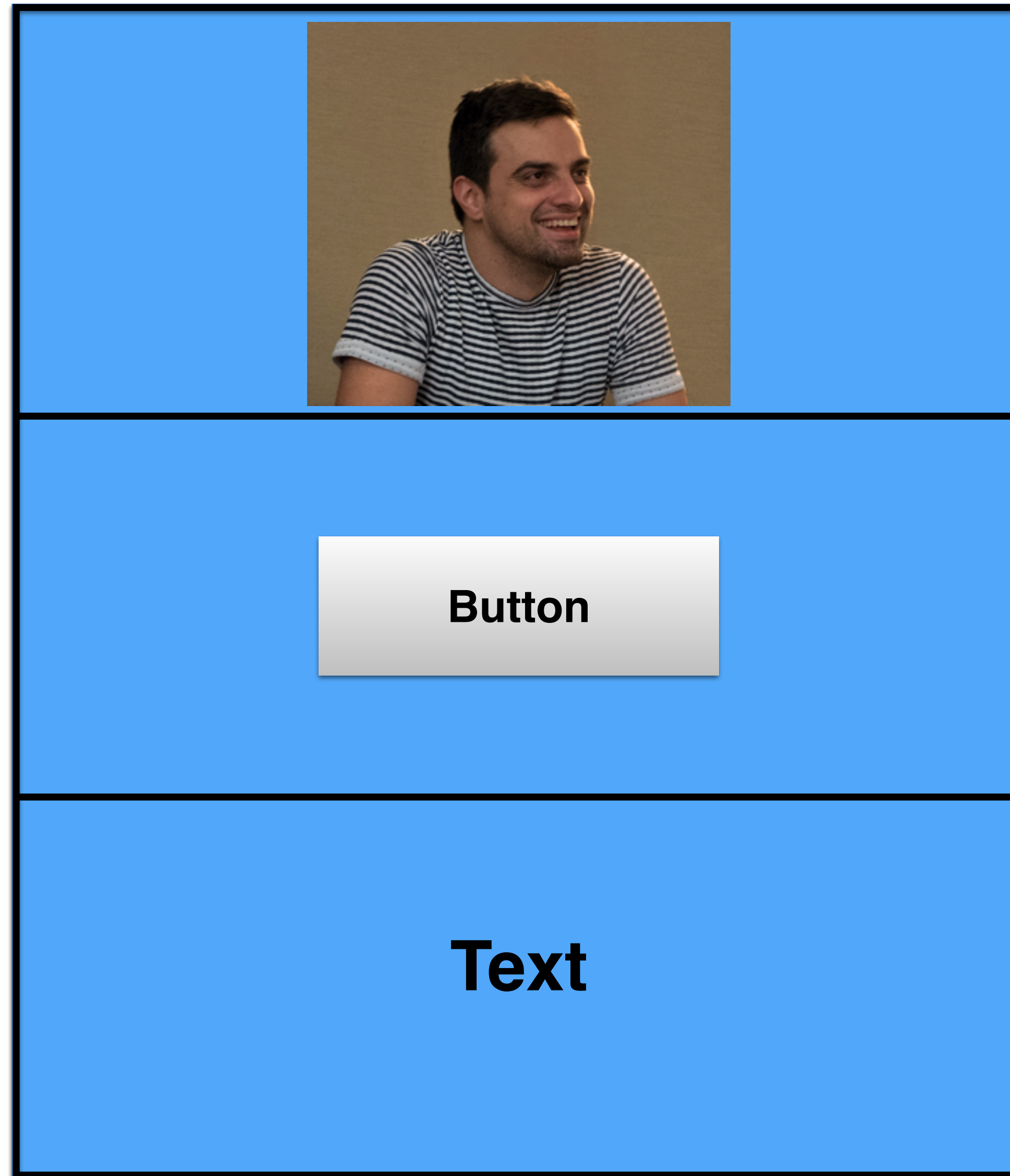


```
)
```

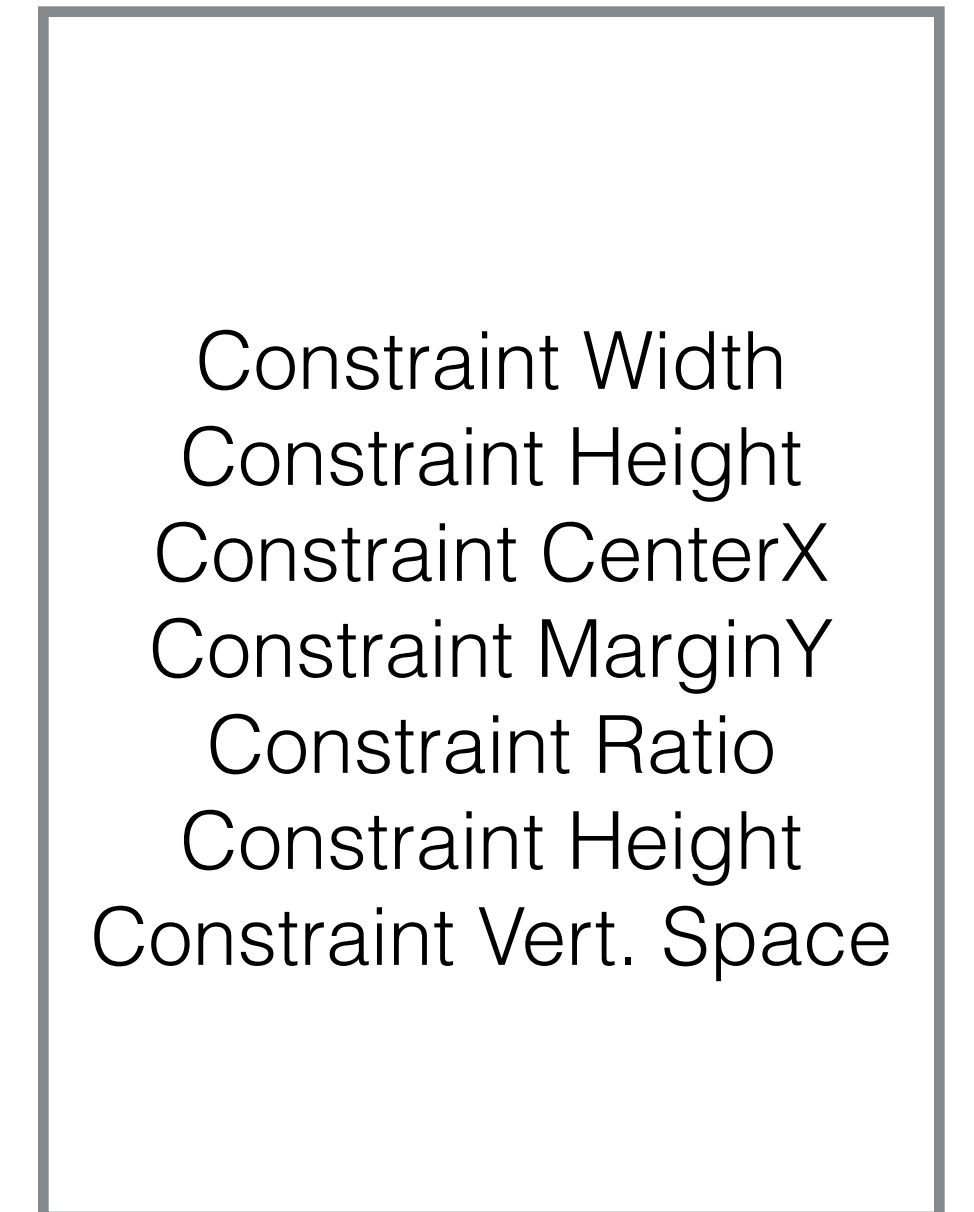


Demo...

UIStackView



horizontal/vertical  
centered  
margin space



consult prev. slides

AutoLayout



Demo...



# Thank you!

Marin Todorov

[www.underplot.com](http://www.underplot.com)





*Please*

**Remember to  
rate this session**

*Thank you!*

