



## MELTDOWN & SPECTRE FOR NORMAL PEOPLE

## SPECTRE: BRANCH PREDICTION

















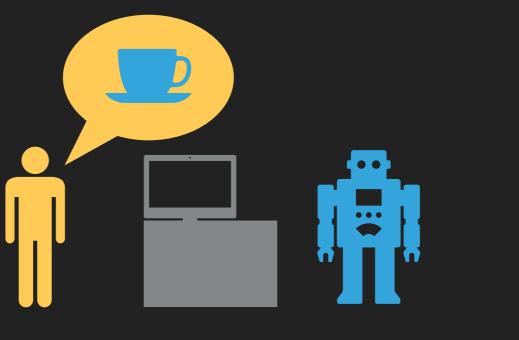






## **SPECTRE: BRANCH PREDICTION**







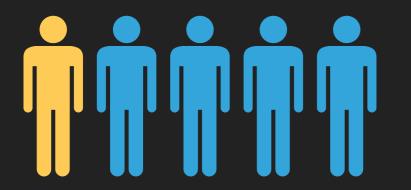


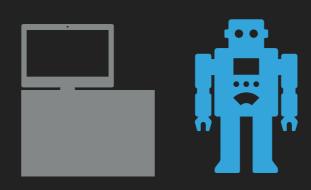
Wednesday

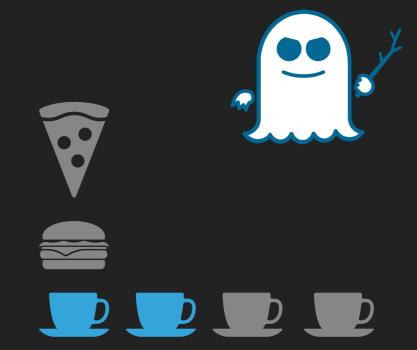




## **SPECTRE: SPECULATIVE EXECUTION**







The CPU can improve the coffee machine utilisation by speculatively brewing the coffee for  $\frac{1}{1}$ 

This is very similar to the effect seen in Meltdown.