

COMP6441 Lecture 3

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April 30, 2017

1 Risk

- Human beings are not very good at understanding or making correct decisions about risk. Security is all about risk.
- Weigh up and put a price to risk. Everything has risk. At what point is it worthwhile to take the risk?
- Risk is invisible. Outcomes are visible. We don't see the chance of a bad thing happening, we just see the consequence of it happening. But this doesn't mean we aren't actually wearing the risk.
- This means that taking a risk that doesn't lead to a bad outcome doesn't justify not concerning yourself with the risk.
- Humans make good decisions about risk when the chance of a consequence happening is not too low. But when there is a low probability/ high impact event then humans become much less capable of assessing risk.
- In finance, there is a lot of past data which allows you to calculate weightings. In security, there is not enough data to make this kind of pricing model.
- How do we deal with high consequence, low probability risk? Two extremes: over-reaction and under-reaction. How do people respond to these events when they do happen. E.g. living on San Andreas fault line.
- Need an abundance of data to make more sensible decisions - see financial risk analysis.