MLPR Lecture 1

tinyurl.com/edmlpr
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In lectures:
- Ask questions
- Point out mistakes

After class questions:
- here briefly
- outside ... or Inf. Forum
- office hour
- hypothesis ← Please sign up and try it out.
- email

Instructions on website.
Cartoon view of Machine Learning

Image (pixels) → Function, f → Location of face

Email/text → Label f(\(x\)) ∈ \{spam, ok, phishing\}

Write f by hand?

- if "Ray-Ban" in \(x\): spam \(+ = 10\)
- if "IT Help Desk" in \(x\): phishing \(+ = 100\)
- if "Bayesian" in \(x\): ok \(+ = 106\)

Parameter \(\Theta\) or \(w\) weights

Prediction = argmax (spam, phishing, ok)
Auto-encoder

Image $x \rightarrow \square \rightarrow \text{Free parameters } \theta \rightarrow \text{Image } f(x)

Goal $f(x) \approx x$

$\vdash \rightarrow \vdash \rightarrow \Box \rightarrow \vdash \rightarrow \vdash$

Bottleneck

The papers I showed you are linked to in the typeset notes.