# domain knowledge

gaurav and suriyan

domain?

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### Why predict the category of content hosted by a domain?

- malware and phishing
- adult content
- personalization
  - you can have your *cookie* and eat it too!

would we?

But if we were to learn from domain names, how would we?
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   2B domains
- privacy
- accuracy



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  - compare with Alexa 1M to build classifiers that can tell those apart

### How to Classify Text - Text → Embeddings → Classifier

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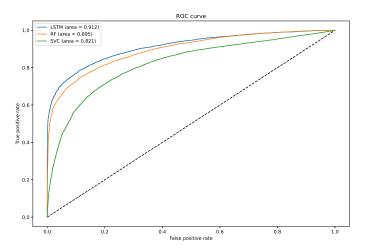
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#### - In Our Case:

- Embeddings of common bi-chars
- LSTM



PhishTank

- Are disadvantaged people most at risk online?

**Application** 

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- comScore panel

## **Application**

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- domain level data for a machine in a household + household attributes

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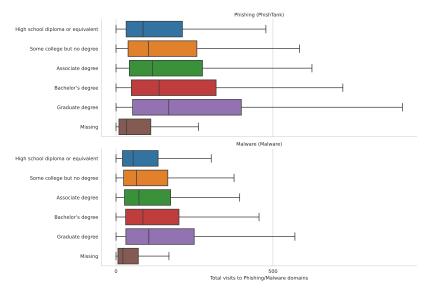
### Solutions

- Calibration  $\rightsquigarrow FP = FN$  locally
- Using curated lists (manual coding) for popular domains



The better educated visit phishing/malware

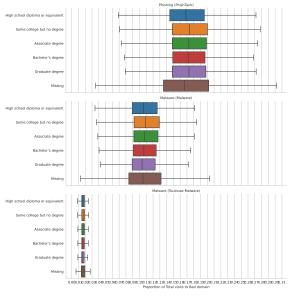
domains most often



Visits to phishing/malware domains



But the better educated don't choose worse



Proportion of visits to phishing/malware domains