FINE 434: FinTech

Lecture 1

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FinTech

‣ **Blockchain**
  Bitcoin, Ethereum, Ripple, IBM Blockchain, ICOs, ...

‣ Online Lending
  Lending Club, Prosper, OnDeck, ...

‣ Robo-Advising
  WealthFront, Betterment, ...

‣ ...

Blockchain

"It has the potential to really revolutionize financial markets..."

Blockchain: A Distributed Ledger System

- ‣ Electronic Ledger
    - ‣ Entries are recorded in discrete chunks called blocks
    - ‣ Blocks are chained together in a near-chronological order
- ‣ Distributed System
    - ‣ Ledger is kept and verified by multiple nodes
    - ‣ Nodes must agree on ledger contents

Potential Benefits
- ‣ Security
- ‣ Efficiency
- ‣ Competition

Blockchain Overview

Typology

- ‣ Public Permissionless
  - ‣ Payment System (e.g. Bitcoin)
  - ‣ Smart Contract Platform (e.g. Ethereum)
- ‣ Public Permissioned (e.g. Ripple*)
- ‣ Private (e.g. IBM Blockchain)

Applications

- ‣ Digital Currency (e.g. bitcoin)
- ‣ Smart Contracts (e.g. Ethereum)
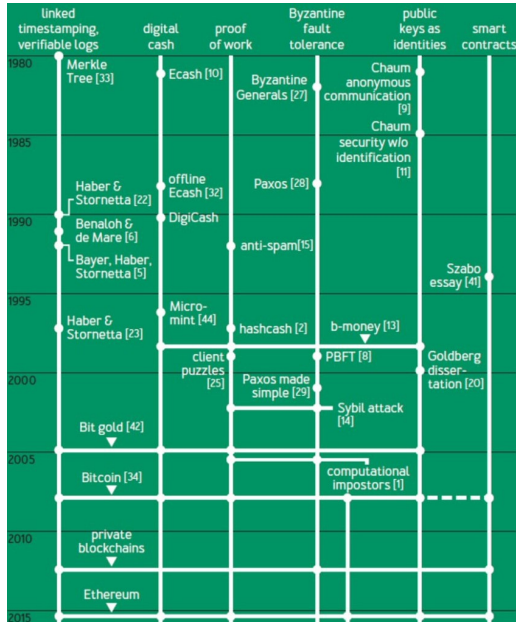- ‣ Industry Applications (e.g. Hyperledger)

Learning By Doing

I hear and I forget. I see and I remember. I do and I understand.

~ Confucius

AZ QUOTES

Fin**TECH**

Course Outline

‣ Tools
   ‣ Python
   ‣ Cryptography

‣ Main Content
   ‣ Permissionless Blockchains
   ‣ Cryptocurrencies
   ‣ Other Topics

Prior coding experience is not a pre-requisite, but all students **must** develop Python coding proficiency within the first three weeks of class. Moreover, students **must** complete "Learn Python 2" at CodeAcademy.