Computer Security

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Relevant Shit

- Course website: http://www.cs.ou.edu/~songf/teaching/F19cs5173

What is Security?

- Making certain data accessible/inaccessible based on different credentials and preferences
- Authentication
- Data protection

Course Objectives

- Understanding of basic issues, concepts, principles and shit
- Learn what we want to learn about security

Course outline

- Basic security concepts of confidentiality, integrity, availability, security terms, and security mechanisms
- Cryptography such as basic number theory, secret key cryptography, public key cryptography, hash functions, and key management
- Identification and Authentication basic concepts and protocols
- Network and Distributed Systems Security stuff like public key infrastructure (PKI), kerberos, IPsec, Internet key management

Why this course?

- Cyberattacks happen all the god damn always
- Horny singles are flooding the email inboxes of everyone on the planet

Contributing Factors

- Lack of awareness of threats and risks of information systems
    - Security usually isn't a priority until some bad shit goes down
- We can't assume that any system is secure
- Security is becoming more of a prominent issue to companies now
- TCP/IP protocols weren't made with security in mind
- Security is v complex, not just encryption and authentication
- Software is vulnerable my dude
- Hackers keep getting better