## Why do we need operating systems?













## Why learning about operating systems

- An exciting time for building operating systems
  New hardware, smart devices, self-driving cars, data centers, etc.
  Facing OS issues in performance, battery life, security, isolation
- Pervasive principles for systems in general
  Caching, concurrency, memory management, I/O, protection
- Understand what you use
  System software tends to be mysterious
  Understanding OS makes you a more effective programmer
- Complex software systems
  Many of you will go on to work on large software projects
  OSes serve as examples of an evolution of complex systems