

# 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