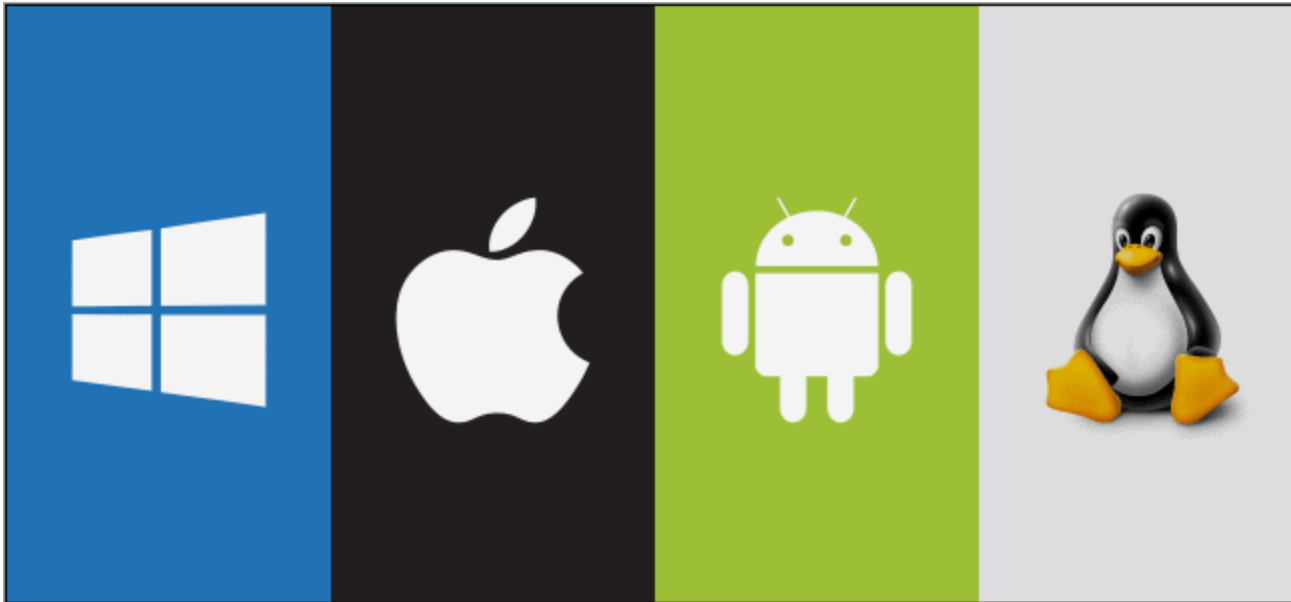


# Why We Are Teaching This Class

# The Gap in Traditional CS Education

- Advanced Topics: Operating Systems



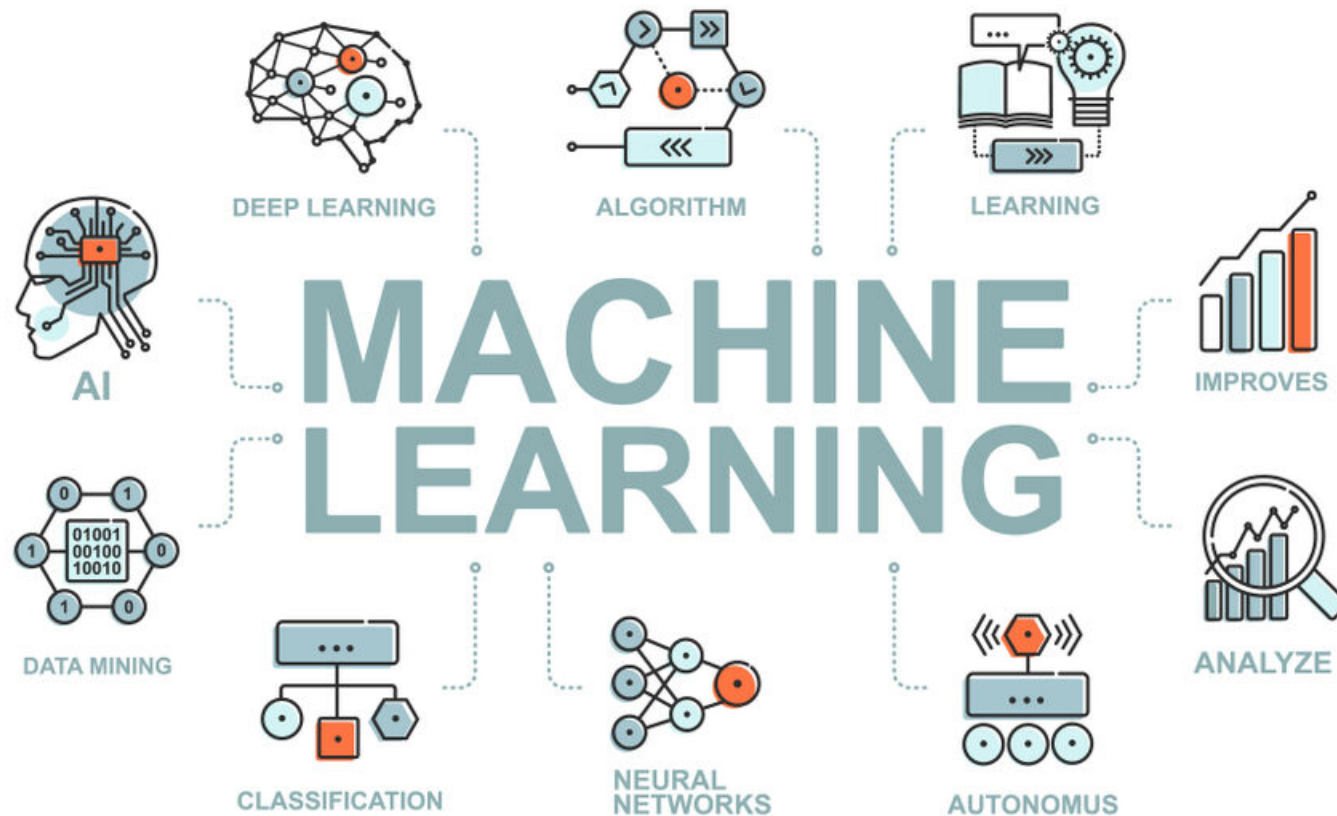
# The Gap in Traditional CS Education

- **Advanced Topics: Operating Systems, Programming Languages**



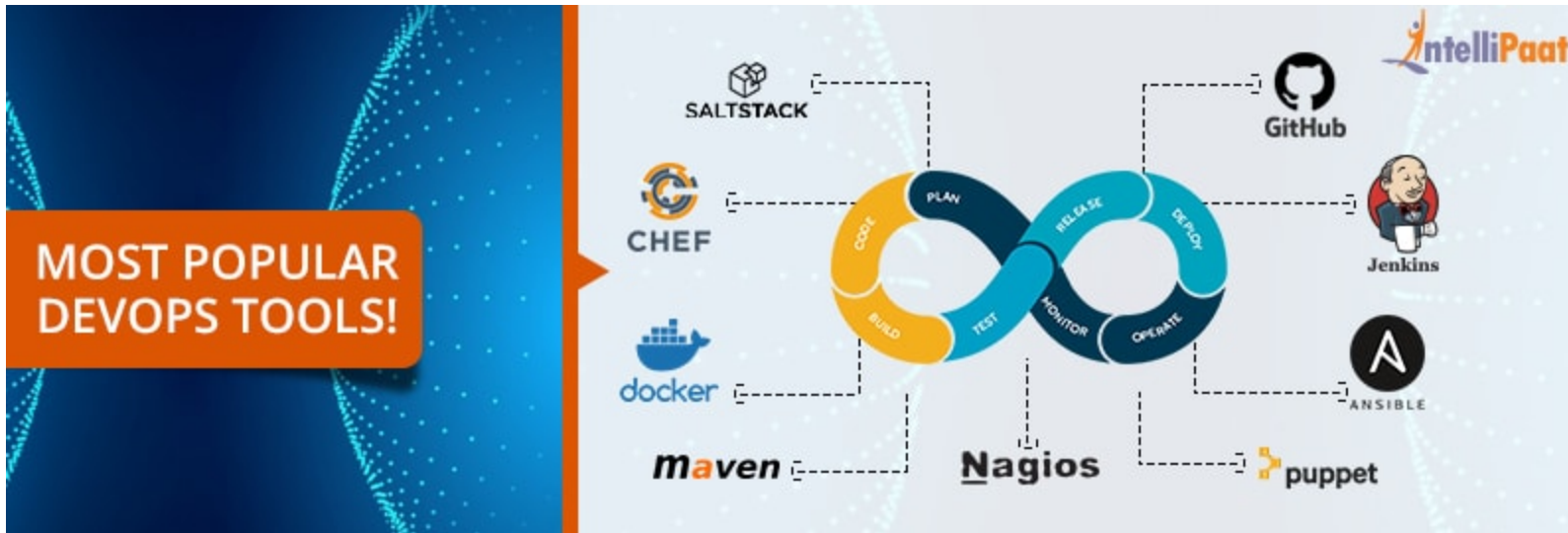
# The Gap in Traditional CS Education

- Advanced Topics: Operating Systems, Programming Languages, Machine Learning



# The Gap in Traditional CS Education

- Advanced Topics: Operating Systems, Programming Languages, Machine Learning
- Rarely Covered: Computing ecosystem literacy



# The Problem

- Observation at SUSTech: Students have limited knowledge of essential tools.

## Computer Science Major



What my friends think I do.



What my mom thinks I do.



What society thinks I do.



What my professor thinks I do in class.



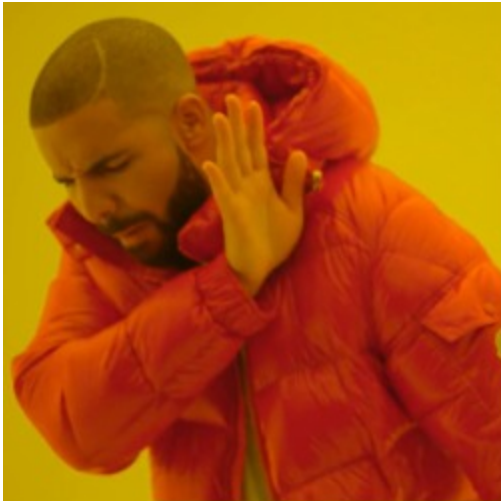
What I think I do.



What I actually do.

# The Problem

- Observation at SUSTech: Students have limited knowledge of essential tools.
- Computers' Purpose: Automate manual tasks.



Spending  
a few minutes  
entering  
data manually



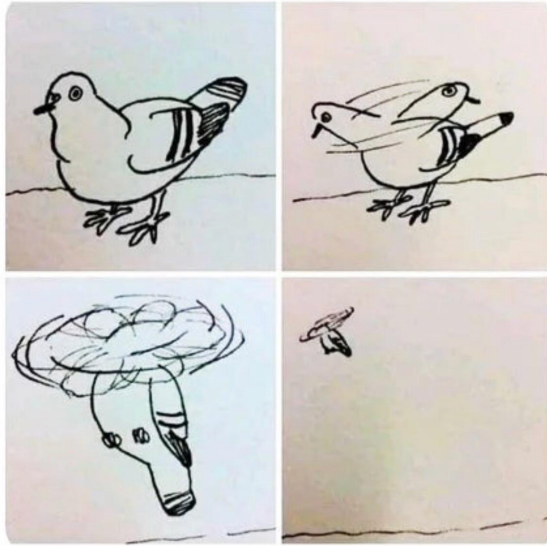
Spending  
a few hours  
writing a script  
to enter  
data automatically



# The Problem

- **Observation at SUSTech:** Students have limited knowledge of essential tools.
- **Computers' Purpose:** Automate manual tasks.
- **Reality:** Students perform repetitive tasks manually.

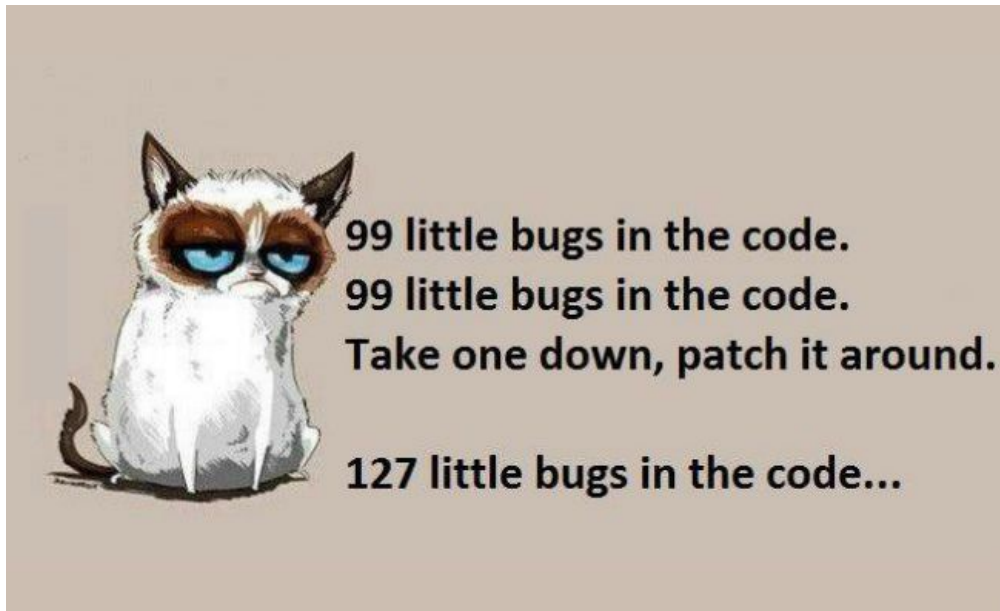
When your program  
is a complete mess,  
but it does its job





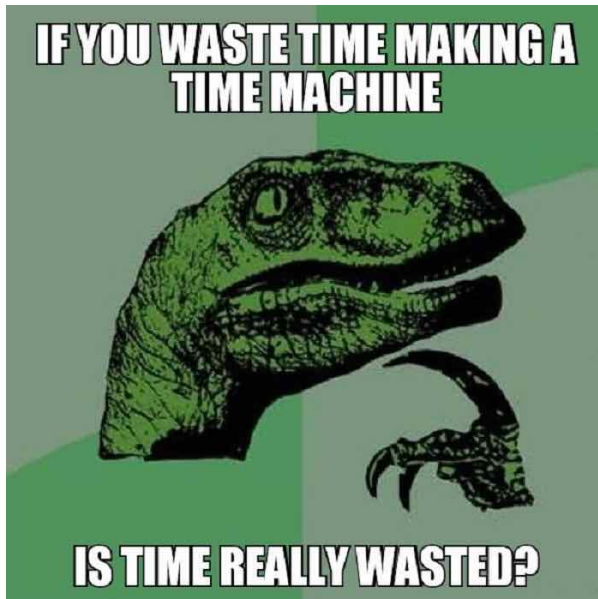
# The Problem

- **Observation at SUSTech:** Students have limited knowledge of essential tools.
- **Computers' Purpose:** Automate manual tasks.
- **Reality:** Students perform repetitive tasks manually.
- **Consequences:**
  - Inefficiencies and wasted time.



# The Problem

- **Observation at SUSTech:** Students have limited knowledge of essential tools.
- **Computers' Purpose:** Automate manual tasks.
- **Reality:** Students perform repetitive tasks manually.
- **Consequences:**
  - Inefficiencies and wasted time.
  - Severe issues like data loss.



## What's Missing

- **University Curriculum:** Lacks teaching on powerful tools like version control and text editors.
- **Result:** Time and effort wasted on simple tasks.
- **Critical Topics Omitted:** Computing ecosystem essentials for an easier CS life.

# The Missing Semester of Your CS Education

- **Our Solution:** A class covering crucial practical skills.
- **Hands-On:** Immediate application of tools and techniques.
- **Original By:** MIT's Independent Activities Period, January 2020. [\[LINK\]](#)
- **Accessibility:** Materials and lectures available to the public.

# Concrete Examples of Class Content

- Concrete Examples:
  - Version Control: How to use `git` efficiently.

You

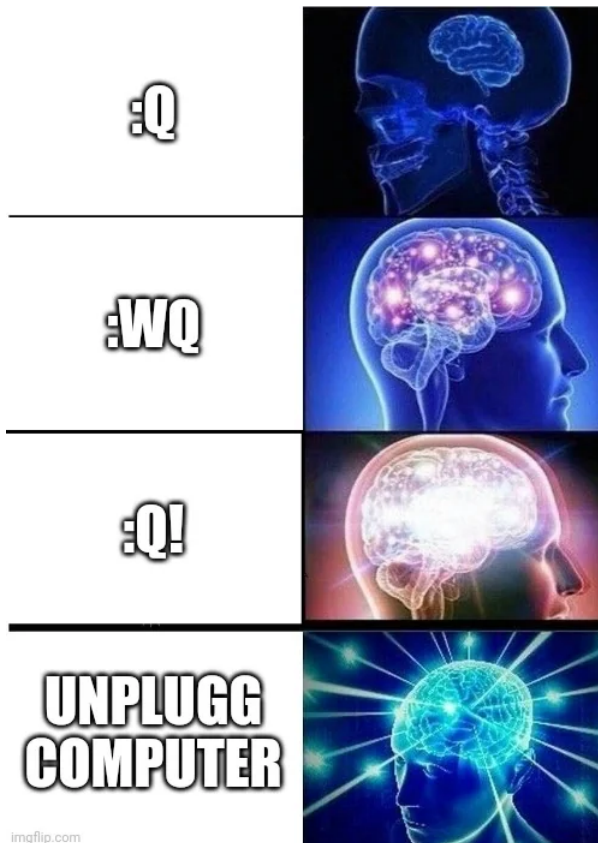


Vs The guy she told you  
not to be worried about



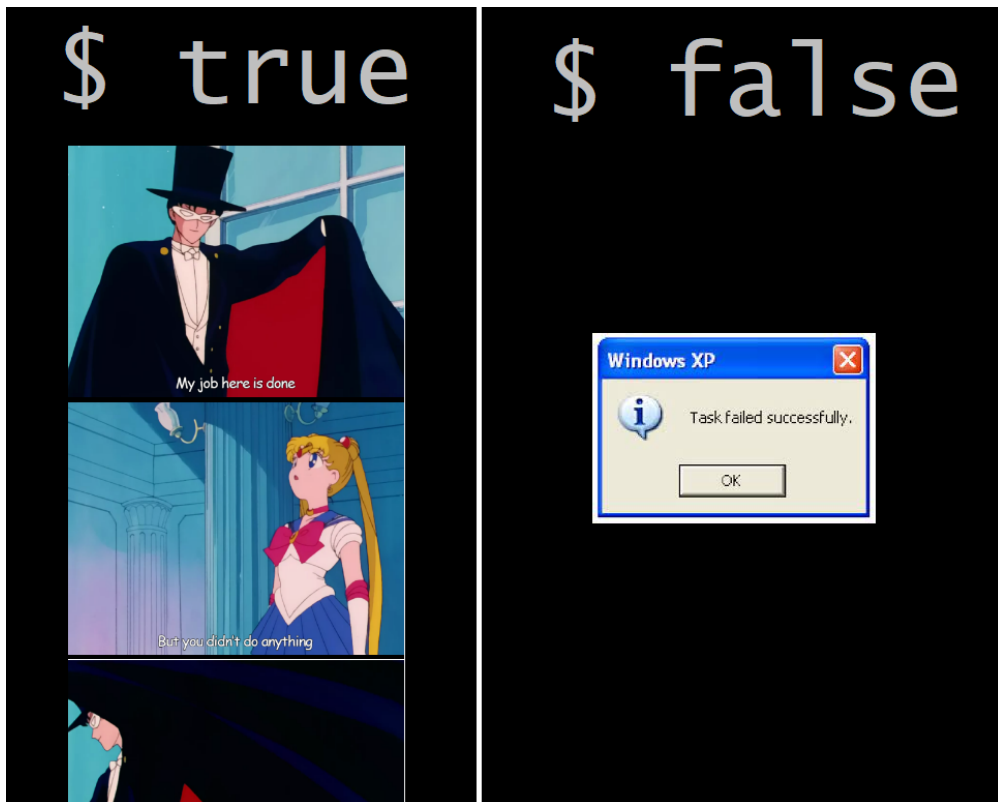
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- Concrete Examples:
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  - Text Editors: Mastery of `vim` or `emacs`.



# Concrete Examples of Class Content

- Concrete Examples:
  - Version Control: How to use `git` efficiently.
  - Text Editors: Mastery of `vim` or `emacs`.
  - Command Line Usage: Automate tasks with shell scripting.

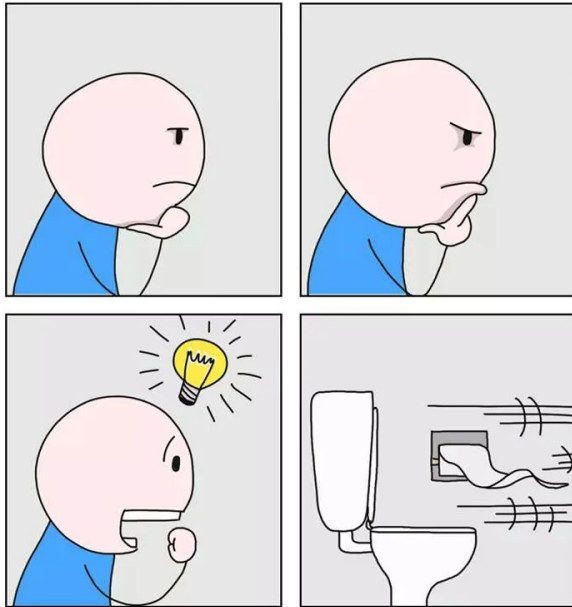




# Concrete Examples of Class Content

- **Concrete Examples:**
  - **Version Control:** How to use `git` efficiently.
  - **Text Editors:** Mastery of `vim` or `emacs`.
  - **Command Line Usage:** Automate tasks with shell scripting.
  - **And More:** Debugging, profiling, and more.

DEBUGGING



MONKEYUSER.COM

## Conclusion

- **Empowerment:** Equip yourself with the knowledge to be more effective.
- **Efficiency:** Save time, avoid frustration, and focus on what truly matters in your CS education.
- **Fun:** Enjoy the power of computing.