Games as Examples
in the CS Classroom
My own experience….

Numerous capstone projects…involving
game development….
1. **Require many CS skills**
   - **Algorithms**
   - **Data structures**
   - **…**
2. *Students really like them.*
3. *Students work hard.*
4. *Students learn much and retain it.*

Games as Examples
in the CS Classroom
My own experience…(cont)

Budd's *OOP in Java*
1. **Example game development…. (pong)**

Budd's new Python text
1. **Sudoku solver**

I wish there were more exemplars I could use!

NSF ICER Initiative:
The Northwest Strategic Initiatives

1. Improve the quality of education
2. Attract more people ….
3. Improve retention….
4. Strengthen interdisciplinary connections….
5. Improve CS educational research ….

How do "games in the classroom" address these?

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How "games in the classroom"
Improve the quality of education

Provide quality programming examples that
- Generally *not* sexist or racist or ….
- *Have interesting intellectual content….*
- *Do not require 'heavy' math*
- *Have requirements that do not need life experience and take a short time to master*
- *Require interesting CS solutions, across range of paradigms*

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How "games in the classroom"
Attract more people….
Improve retention….

- *There are communities of "gamers" where we could recruit….*
- *Students with successful experiences relate those to peers….*
- *Having fun releases stress ; CS is stressful…*
- *Students with successful experiences stay in the program*

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How "games in the classroom"
strengthen interdisciplinary connections

Some games require gaining or applying knowledge of other disciplines for playing well….

Some games are interesting to
- *psychologists*
- *Urban planners*
- *Historians*
- *Biologists*

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How "games in the classroom" increase CS educational research

Contentions that games 'help' need to be shown empirically…..

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