

# Crowdsourcing and AI

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## Lecture 2

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# Summary of last lecture

1. Personal Motivations for this Course
2. Course Outline and Timeline
3. Classwork : Zooniverse User Experience
4. Homework : Reading “The Rise of Crowdsourcing”

# Zooniverse Experience

Science: what did you learn from trying to participate?

Technology: what was your experience with the interface?

Society: How many volunteers? How do they communicate?

AI : Could the task be done by an AI? Is AI already involved ?

# Rise of Crowdsourcing

iStockPhoto

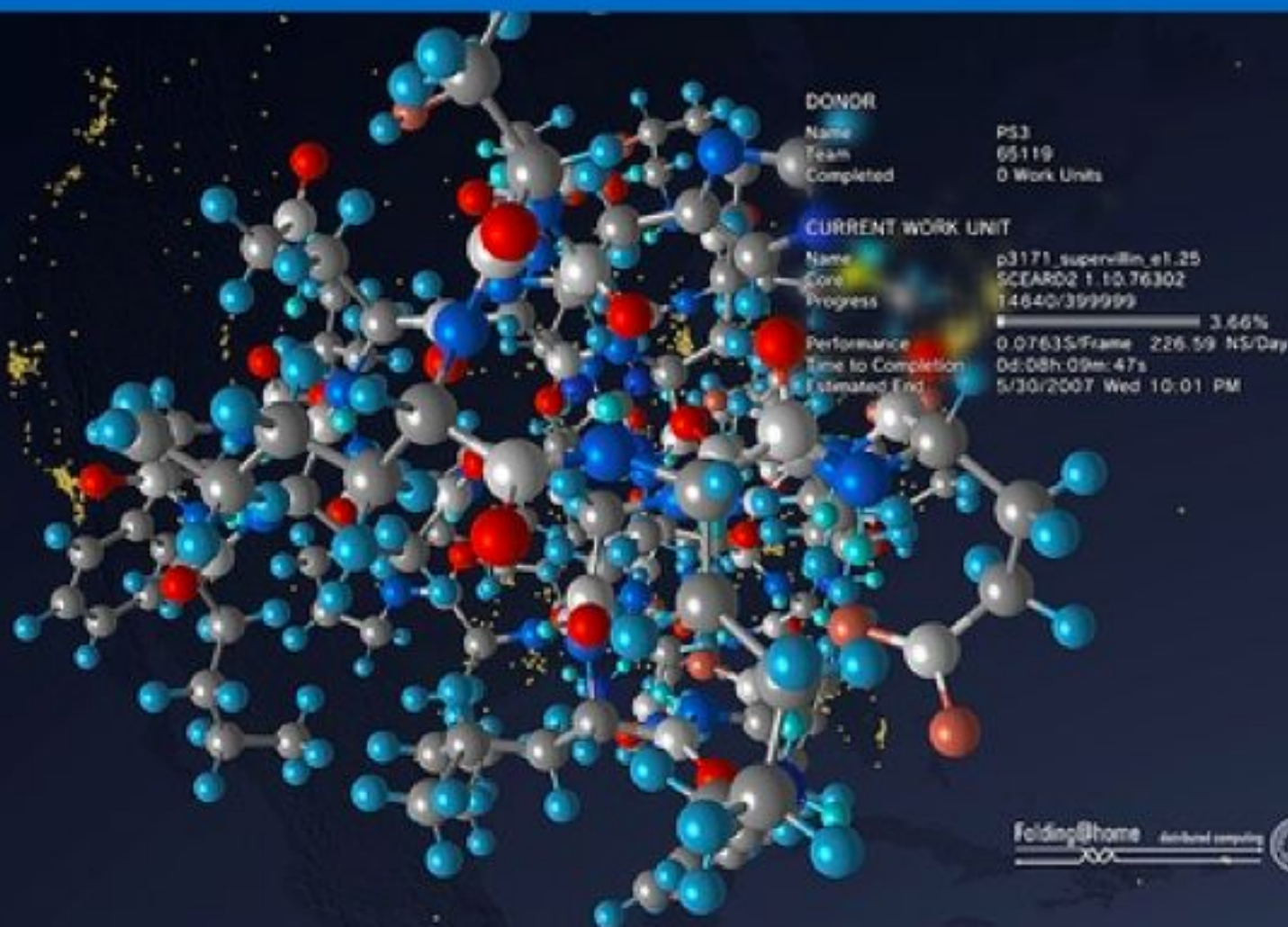
Innocentive

Amazon Mechanical Turk

SETI@home

Wikipedia

# Folding@home: >1 petaflop using 50k volunteer Playstation-3s



# Foldit: volunteer protein folding



The screenshot displays the Foldit game interface. On the left, a 3D protein structure is shown with various colored segments (green, blue, red, yellow) and a glowing blue aura. The right panel shows the competition leaderboard. The top section displays the player's rank (41) and score (7054). Below this, the 'Group Competition' table lists the top groups. The 'Player Competition' table lists the top players. At the bottom left, a toolbar contains icons for 'Shake Sidechains', 'Wiggle Backbone', 'Clear Locks and Bands', 'Reset Puzzle', and 'Mouse Help'. The bottom right corner features a 'Pull Tool' icon.

Rank: 41      Score: 7054  
47: Human Fyn

▼ Group Competition

| # | Group Name      | Score |
|---|-----------------|-------|
| 1 | Window Group    | 9168  |
| 2 | Truman College  | 9166  |
| 3 | Street Smarts   | 9164  |
| 4 | The Lone Folder | 9162  |

▼ Player Competition

| # | Player Name   | Current | Best |
|---|---------------|---------|------|
| 1 | ccarrico      | -       | 9168 |
| 2 | charlesabrams | -       | 9166 |
| 3 | zzaltz        | -       | 9164 |
| 4 | ferzle        | -       | 9162 |
| 5 | Ninning       | -       | 9158 |
| 6 | Thor          | -       | 9158 |

► Chat

Shake Sidechains   Wiggle Backbone   Clear Locks and Bands   Reset Puzzle   Mouse Help

► Actions   ► History   ► View   ► File

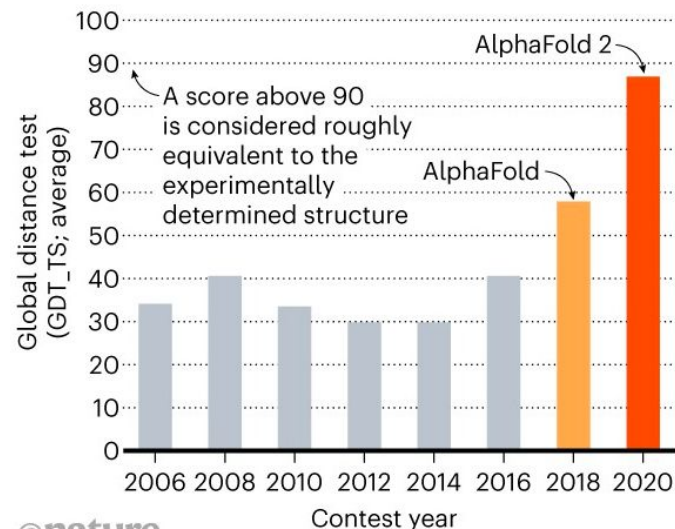
Pull Tool

# Alpha Fold 2

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## **‘It will change everything’: DeepMind’s AI makes gigantic leap in solving protein structures**

Google’s deep-learning program for determining the 3D shapes of proteins stands to transform biology, say scientists.



# Classwork

BOINC (Berkeley Open Infrastructure for Network Computing) is an open source software (or more precisely, middleware) for sharing computing power.

*What licence does BOINC use.*

*In your opinion, why did the developer choose this option?*

Load BOINC on your machine.

Choose a BOINC project and join it.

*Science: what did you learn from trying to participate in one?*

*Technology: what was your experience with the interface?*

*Society: How many volunteers? How do they communicate?*



# Homework

Read the PNAS paper about “crowd science”

Crowd science user contribution patterns and their implications  
Henry Sauermann and Chiara Franzoni

PNAS January 20, 2015 112 (3) 679-684;  
first published January 5, 2015

What challenges do the authors identify for crowd science?

How do the results inform current science policy discussions?

What aspects of their analysis were not clear to you, and why?