Projects

Very open-ended
Go for BIG ideas! (No such thing as “failure.”)

E.g.
Can you evolve a language from scratch?
Can you learn from “reading”? (E.g. game play from text on discussion boards)
Mechanical Turk --- Human-computing hybrids
Mine info from twitter feeds
Boost game play via “mimicry”
AI Knowledge-Data-Inference Triangle

Knowledge Intensive
Common Sense

NLU

Computer Vision

20+ yr GAP!

Machine Learning

Verification

Iamus

Dr. Fill

semantic Web

Robbin’s Conj.

Deep Blue

Google’s Knowl. Graph

Google Transl.

Siri

Google Search (IR)

Inference/Search Intensive

Data Intensive
Knowledge or Data?

Last 5 yrs: New direction.

Combine a few general principles / rules (i.e. knowledge) with training (ML) on a large expert data set to tune hundreds of model parameters. Obtain world-expert performance using inference.

Examples:

--- IBM’s Watson / Jeopardy
--- Dr. Fill / NYT crosswords
--- Iamus / Classical music composition

Performance: Top 50 or better in the world!

Is this the key to human expert intelligence?

Discussion / readings topic.