What is Sym Sys about?

Cognition

Computation

HCI
AI
Cog Sci
Some theoretical questions

Can computers think?
Is language innate?
Are humans rational?
Is information technology prosocial?
Is the brain symbolic?
Does language shape thought?
Do animals use language?
Some practical questions

How can you design a voice interface that will work well for people?

How can you design an ontology for events in a calendar program?

How can you design an experiment to see whether an interface change will improve usability?

How can you design a computational model that will predict human responses on a task?

How can you design a program that will correctly parse a sentence?

How can you design software that will enhance democracy?
Core methods and their markers

Philosophical – definitions, claims, arguments, analysis

Formal – definitions, axioms, theorems, proofs, syntax, semantics, models

Computational – data structures, algorithms, programs, frameworks, complexity

Observational – independent and dependent variables, qualitative and quantitative measures, hypotheses, data, analysis

Experimental – conditions, subjects, hypotheses, data, analysis
Characteristics of the Symbolic Systems Program

Interdisciplinarity

Problem/question-based, not methods-based

Application-oriented

- computation<->cognition
- theory to practice
The Sym Sys trajectory
1980s

cognitive

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- - > symbolic systems  <--

| artificial intelligence | human-computer interaction |
The Sym Sys trajectory
2000s

cognitive

science

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|-- symbolic systems |
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artificial intelligence  human-computer interaction
What is a symbolic system?

formal logic?
language?
Turing machine?
computer program?
person?
mind?
brain?
society?
Practical advice

Get to know faculty – find an advisor
Do some research and/or independent study
Plan ahead
Don't take too many courses
Read your SSP email
Go to the forum, other lectures, and dinners
Attend SSP social events
View courses and lectures as being about skill development
Practical advice (continued)

Practice reading and listening – learning is a skill!

Think of yourself as the young version of whatever you want to become

Talk to people about what you are studying

Watch to see what excites you

Don't get too caught up in how much you like instructors

Learn time management