

Homework #6 Brain Building, Using HeX

Internet Bots, Spiders, and Emotional Agents
Fall 2001
LIACS, Leiden University

for Prof. Doug DeGroot

Homework 6: Brain Building, Using HeX

Goal: Construct a Hex-based Chatterbot, using the standard Hex application code.

Due: Thursday, December 13, 2001

(submit via email to BotClass <degroot@liacs.nl>)

Description: Construct a chatterbot persona and personality using the HeX engine. You may define any chatterbot persona model you wish and endow it with a personality of your choice. The project consists of four main activities: 1) getting familiar with the specific functional model of HeX, including the philosophy and set of tricks it uses, 2) selecting and defining the type “person” you want to encode along with designing the person’s (bot’s) personality, 3) creating and testing the HeX-based “brain files” for your chatterbot, and 4) producing a post-mortem analysis of the experiment.

Assignment: Develop a chatterbot based on some functional or problem-solving model and persona; a simple chattering chatterbot would likely be insufficient. For an example, consider the implementation of a chatterbot based on the concept of a priest presiding over a parishioner’s confession. The functional model of the priest and the selected action(s) constitute the basic chatterbot model, but the specific personality of the priest can (and most likely would be) separate; clearly, different priests have different personalities. Another example worth considering is a Customer Service Representative at Amazon.Com, speaking over the telephone, to a dissatisfied customer. One insight you should develop is that some functional models you would like to implement will run up against inherent limitations of the HeX approach. Your thoughts and observations on this will be highly valued as part of your final report.

Your chatterbot should exploit some of the same tricks that HeX does, although in ways consistent with your chosen persona and personality. Not all tricks have to be used; for example, feel free to leave insults out of your design.

Collaboration: This project can be done in teams of 1 to 5 persons.

Deliverables:

1. A list of the team members.
2. A one page report, written by each team member, describing the specific work you have done, how you did it, and most importantly what you have learned from this project.
3. A description of the persona, it's functions, and it's personality traits you have tried to exhibit. Describe your approach, all "tricks," and any clever approaches you incorporated into your bot's personality.
4. A "readme" file describing the artifacts you are turning in and how they should be used.
5. The brain files you have constructed and "run" using the HeX program. In case you deem it necessary to modify the HeX engine, then you also need to turn in the modified HeX code along with a description of the changes you made to the code and the location of those changes.
6. Two or more log files of your (or someone else's) conversations with your chatterbot.

Resources: *(downloadable from the Hotline server)*

1. The HeX program, both source code and executable.
2. The original HeX brain files, to be used as examples.
3. Papers on HeX and other Loebner contest participants.
4. A program discussion file (forthcoming), describing basic approaches, descriptions of key algorithms in the code, descriptions of the brain file formats.

Remarks:

Even if you do not modify the code for HeX, it may become apparent to you during the personality coding that you would benefit from extra capabilities within the HeX engine. Please feel free to describe multiple desirable modifications and additions to the code that you believe would be worthwhile. However, the goal is here is to suggest incremental changes and improvements, not wholesale redesigns of the engine.

Also, you are welcome to use another suitable chatterbot such as Alice, if you first submit a request and reasons.