

Tools Platform for CS 530

1) Java

Use the 6.x version of Java. This is available from the sun site. Since you will need an IDE. You may want to download the complete package, which includes NetBeans 5.5 RC1. Otherwise you can download the NetBeans IDE from <http://java.sun.com/javase/downloads/index.jsp>

If you like to live “on the edge” try Netbeans 6.0
<http://www.netbeans.org/community/releases/60/index.html>

Installation of these two items is rather straightforward. No matter which computer/OS you are running on, make sure that you have the JDK for Java and not just the JRE. Using these Derby (database) is included. If you are using the 5.x SDK you will need to add Derby to the mix. See <http://developers.sun.com/javadb/>

Basic tutorials are available at
<http://www.netbeans.org/kb/55/derby-demo.html>
<http://java.sun.com/developer/technicalArticles/J2SE/Desktop/javadb/>

The Derby home is at <http://db.apache.org/derby/index.html>

2) Jess

Now we need to add Jess to the mix. The main site for Jess is at:
<http://herzberg.ca.sandia.gov/jess/>

We will be using the 6 or 7 versions. You can download this version from the site or get the version from the textbook site at:
<http://www.manning.com/friedman-hill/>

Both options require a form of registration. You may also get the “full” version, which includes the source from the main Jess site. This requires registration for a license. The registration is free. It may take a couple of days to get the license if you take this option.

Jess tools

Jess tools can be added to the mix. A good tool to have is the JessWin tool, which can be found at:

<http://www.jessrules.com/contributions/>

If you are interested in developing a more sophisticated tool or just want to explore an alternative, check:

<http://iis.fon.bg.ac.yu/JessGUI/home.html>

You might also want to use the JSR rule engine approach. See http://www.jessrules.com/jess/ri_overview.shtml and

<http://jcp.org/aboutJava/communityprocess/review/jsr094/> Also see <http://java.sun.com/developer/technicalArticles/J2SE/JavaRule.html>

3) Protégé

You may want to explore ontologies. Protégé is a good ontology editor. The main site is: <http://protege.stanford.edu/>

You will want to get the beta version since it has integrated support for OWL.

<http://protege.stanford.edu/download/prerelease/full/>

Make sure you get the “full” version.

Check the documentation at:

<http://www.co-ode.org/resources/reference/>

and

<http://www.co-ode.org/resources/tutorials/ProtegeOWLTutorial.pdf>

The basic documentation for Protégé, which uses the old user interface is at:

http://protege.stanford.edu/doc/users_guide/

More documents are available at:

<http://protege.stanford.edu/doc/users.html>

You will need the “ontology 101” document at:

<http://protege.stanford.edu/doc/users.html>

Be aware that the user GUI is different in the current version. The basic ideas are the same, however.

If you have the urge to develop code, check:

<http://protege.stanford.edu/doc/dev.html>

You may also want a description logic engine. The Racer engine is preferred. This requires a license registration. Go to

<http://www.racer-systems.com/products/racerpro/index.phtml>

Follow the instructions at the site.

4) Words and meanings

You might want to try the Java version of WordNet at

<http://sourceforge.net/projects/jwordnet>

The home for WordNet is <http://wordnet.princeton.edu/>

5) Visualization

For information visualization prefuse is very good. See <http://prefuse.org/> . Others are available.

6) Learning

A good starting point is Machine Learning Tools in Java (MLJ)

<http://sourceforge.net/projects/mldev> A more comprehensive software that makes the relation to data mining clear is the Weka Machine Learning Project at <http://www.cs.waikato.ac.nz/~ml/weka/>

7) Other items of interest

A nice tool that links agents and Jess can be found at

<http://www-i4.informatik.rwth-aachen.de/agentcities/main/agents/JessAgent/doc/JessAgent.html>

All of the basics for FIPA can be found at

<http://www.fipa.org/>

The core documents for FIPA (agent) communication can be found at:

<http://www.fipa.org/repository/aclspecs.html>

ABLE from IBM: <http://www.alphaworks.ibm.com/tech/able>

ROBOCODE from IBM <http://www-128.ibm.com/developerworks/java/library/j-robocode/>

Drools (now a part of JBoss):

<http://labs.jboss.com/portal/index.html?ctrl:id=page.default.info&project=jbossrules>

Algernon: <http://algernon-j.sourceforge.net/>

Listing of game AI sources: <http://www.gameai.com/toolkits.html>

FuzzyJess: http://www.iit.nrc.ca/IR_public/fuzzy/fuzzyJToolkit2.html

CLIPS: <http://www.ghg.net/clips/CLIPS.html>

FuzzyCLIPS: http://iit-iti.nrc-cnrc.gc.ca/license/info_e/3