

# Faculty Showcase '07



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## Goals

- This project involves mentoring a student research project to implement a natural language interface to a transcription retrieval service, using Simmons' AARC as a model. The students chose this application because it is self-contained and non-trivial. In the process, the students learned the steps necessary to secure and implement funded research.

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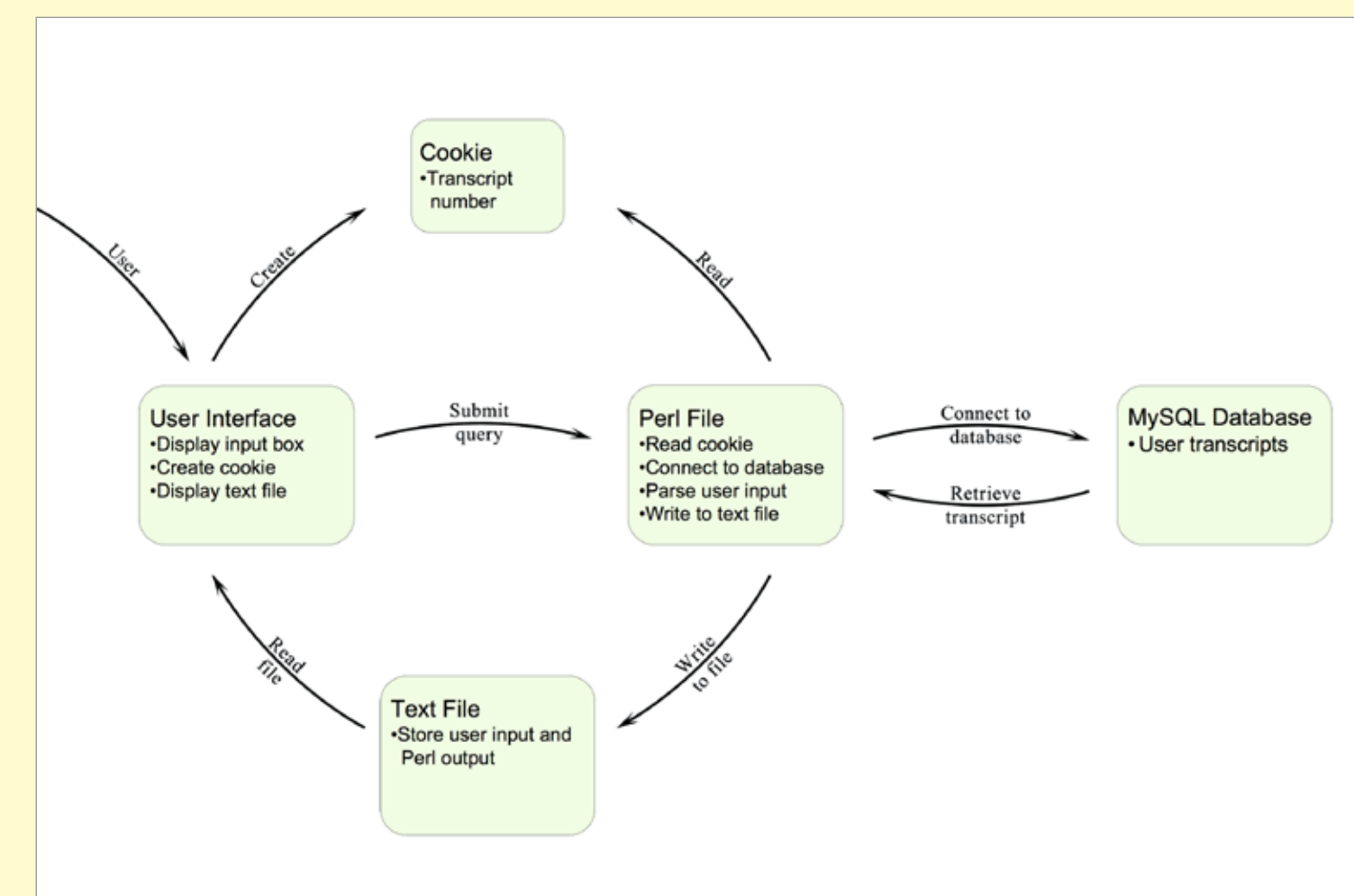


## Simmons College Natural Language Transcript Retrieval Project

### Project Overview

This is a student-directed research project. Its stated goal is to implement an automatic natural language (rather than menu or command driven) interface to a transcription retrieval service, using Simmons' AARC as a model system.

The students choose this application because it is familiar, self-contained and non-trivial. In addition, the advent of cell phones is eventually going to make text driven data base access obsolete.



With a spoken interface, the issue of natural language understanding rises to the forefront – it is much more irritating for speakers to participate in a menu driven query system than it is for typists who can see a broad scope of choices and navigate more quickly.

The second goal of this project is to provide an opportunity for students to learn the process of procuring funds and implementing a supported research study. The project has been funded by the Computer Research Association's committee, CRA-W, (using NSF funds) and therefore benefits Simmons in terms of prestige and funding. CRA-W is a highly visible organization that requires that student projects are also visible. Genni Mushlin and Zainab Al-Subai will produce a web site with their implementation and results.

The educational objectives were to have students plan and implement a major research project. This included:

- initial topic selection,
- preliminary literature review,
- proposal / research plan development,
- proposal submission,
- implementation of research plan, which includes:
  - writing an IRB application to use human subjects in information gathering (lots of paperwork but IRB approval was very quick!)
  - consulting with Simmons personnel about the format of AARC queries
  - conducting a trial using actual Simmons students as subjects to discover how students might request a transcript if able to use unconstrained queries (e.g. as if they were IM'ing a friend who worked in the Registrar)

- developing the code to translate the NL queries into an AARC appropriate query
- testing the system on new subjects
- evaluating the application.

This project demonstrated the value of student-directed research projects. The faculty supervisor and support staff provided guidance only. This serves to achieve the underlying goal to develop the student's intellectual independence.

Welcome to Simmons College Natural Language Transcript Retrieval System.  
Hello  
Hello!  
My Name is Joy Smith. I would like to see my transcript for the fall of 2006.  
Hello Joy Smith. Here is your transcript:

Dept.	Course/Section and Title	Grade	Mode	Credits
CHEM	327 Adv. Apps in Envrnmntl Sci	A-	-	4.00
CHIN	101 Elementary Chinese 1	B-	-	4.00
COMM	122 Writing & Editing Across Media	A	-	4.00
NURS	225 Nursing Process & Skills	A	-	4.00

Do you have any other questions?  
No, thanks.

### Applications Beyond

The model used to mentor the students in their research would benefit all faculty. The process consisted of identifying a funding source, inviting three (targeted) students to join the effort and meeting with them on a weekly basis while the proposal was being written and now on a bi-weekly basis as they implement the project.