

SHAOTING CAI

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SKILLS

Programming Languages

- Strong knowledge with Java, language processing, compiler, translator, assembler, interpreter and Java Swing GUI.
- Experienced with C/C++, STL, distributed computing using MPI and Pthread, game development using Ogre3D.
- Experienced with PHP, MySQL, XMLRPC, Ajax and RIA using Flex/ActionScript.
- Experienced with Python for AI programming: Bayesian spam filter, web crawler using NLTK.
- Familiar with Android application development, ported TinyPy to Android.

Tools & IDEs

- Experienced with UML modeling in Visio, Borland Together.
- Familiar with 3D model and texture creation using Blender and GIMP.
- Familiar with music creation using FL Studio.
- Experienced with NetBeans, Eclipse, SVN, Perforce, Maven, Clearcase.

RESEARCH

[ANTLR gSync](#)

gSync is a tree-based 3-way diff/merge GUI tool for ANTLR v3 grammars. Compared to a text-based diff algorithm, this tree-based one does better on fuzzy matching, pattern recognition, false-change reduction and version synchronization.

[ANTLR gUnitEditor](#)

gUnitEditor is a Java Swing GUI for creating, editing and running gUnit test cases for ANTLR v3 grammars.

Programming Language Projects

- Implemented a tree-based interpreter for a simple-Java which does symbol table management and execution lookup during AST walking.
- Implemented a translator that translates Closure+Java to pure Java.
- Implemented a native code compiler for simple-C using LLVM.

EDUCATION

University of San Francisco, San Francisco, CA, August 2007 - May 2009

MS in Computer Science, 3.9 Grade Point Average

East China Normal University, Shanghai, China, September 2002 - July 2006

BS in Computer Science

WORK EXPERIENCE

Shanda Interactive Entertainment Ltd, Shanghai, China

2006-08-01 - 2007-08-01

Application Engineer

Please go to <http://caichoi.com/mediawiki/index.php?title=Resume> for links to referenced projects

- Participated in designing and developing an [In-game Advertising system](#). Implemented an XML based editor GUI using C++ & Delphi.
- Implemented a state-event-oriented scripting language. The assembler and VM are written in C++. The translator to Lua is implemented using ANTLR.
- Utility application written in Delphi: common game loader, an automated Web Service pressure testing tool, CPU model & network checking plugins for NSIS.
- Web developing: developed a company recruiting MIS and a malicious software tracking system in L.A.M.P., setting up and managing the company knowledge-base Wiki.

East China Normal University, Shanghai, China

2005-06-30 - 2006-02-01

Research Assistant

Implemented a UI designer for the computer-based training & testing software. The tool can automatically duplicate Windows application GUI, edit layout and add test data to the components.

Dreamland Information Co. Ltd, Shanghai China

2004-06-01 - 2005-01-01

Software Engineer Intern

We implemented a C-S application on Windows platform for a governmental department using Delphi and MySQL. In this project, I learned how to work on team, got a good understanding of software development process and practiced a lot on object-oriented programming skills.

COURSE WORK

Gmail-like [web mail](#) project in Java, Jetty, Servlet and Stringtemplate

AI Projects (Python)

- A web crawler using TFIDF algorithm.
- A spam mail classifier using Naive Bayes learning algorithm.
- Ontology design using OWL in Protege.
- A natural language tagger using NLTK.

Google Android Projects

- Porting tinypy interpreter to Android system

Game Engineering using C++, Ogre3D, Blender, ODE and OpenAL

- Pong Game, http://www.caichoi.com/mediawiki/index.php?title=Pong_screenshots
- Tank Game, http://www.caichoi.com/mediawiki/index.php?title=Tank_screenshots

FIELD WORK

Developing and managing an Asian singer's fans site at samueltai.com using PHP, MySQL, XmlRPC, Adobe Flex, AJAX, CSS

- Message board, <http://www.caichoi.com/hs/bbs/MessageBoard.html>
- Gallery, <http://www.caichoi.com/hs/gallery/GalleryApp.html>
- CMS, <http://www.caichoi.com/joomla/>

KEYWORDS

Java, GUI, Swing, ANTLR, compiler, interpreter, translator, assembler, Ogre3d, C++, Android, Python, PHP, XMLRPC, Flex

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