

CARSON N. BAKER

2208 Colquitt St.
Houston, Texas 77098

P: +1 210.488.1347
E: carson@carsonbaker.org

Interaction Designer
Software Developer

EDUCATION

09.2003 - **Trinity University**
05.2007 *Graduate*
BS/Computer Science & Business Admin., with honors.

09.1999 - **Lamar High School, Houston**
05.2003 *Graduate*
IB Diploma recipient. 4.03 GPA.

EMPLOYMENT

10.2008 - **Kickstarter, LLC.**
present *Software Developer*
Development and design of an enterprise-grade Ruby on Rails app for a web startup.

10.2007 - **Chimera Energy**
05.2008 *Quantitative Analyst*
Developed automated trading systems and market models for the oil sector. Provided research to traders, including independent analysis and market guidance.

04.2007 - **Trinity University, MAS Research Group**
08.2007 *Research Consultant*
Facilitated communications among project leaders, researchers in multi-disciplinary project for social simulation. Performed research, software development.

09.2003 - **Trinity University ITS**
09.2005 *Residential Computer Consultant*
Assisted students with their computers. Filled the most work orders for the 2003-2004 school year.

10.2002 - **Texas Children's Hospital**
06.2003 *Database Developer*
Assisted in establishing a database to track biomedical changes in a double-blind study of Rett syndrome. In charge of database maintenance, metrics, and statistics.

06.1999 - **Holy Mac!**
09.2001 *Publisher/Webmaster*
Built a daily news, reviews, and opinions web site to serve the interests of Mac aficionados. Broke several insider stories, garnering substantial advertising and press. Mentioned on Slashdot, CNET, MacWeek, MacCentral, and others. Managed staff of eight writers.

07.2000 - **U.S. Farm Ranch Media Company**
08.2000 *Developer/Designer*
Extended the content management system for Cowboys & Indians online magazine. Improved web presence, user interaction, site design, navigation, and usability. Helped plan, build, and test content workflows.

PERSONAL PROJECTS

Fictionaut, a place for adventurous readers & writers
Built a Ruby on Rails-based web community for short-form fiction writers, focusing on paradigm of social networking.
<<http://fictionaut.com/>>

Switcheroo, a taskbar for the Mac
Developed and promoted a shareware desktop utility to improve user interface on the Mac. Sold 150 licenses.
<<http://carsonbaker.org/switcheroo/>>

A Perl language extension for the Breve agent simulator
Contributed to the Breve simulation project by building a Perl runtime binding and class set for its frontend language mechanism.

A Utility-Driven BDI Model for Nested Agents
Thesis project – Proposed and formally elucidated a planning model structured around the idea of a hierarchically decomposed multi-agent architecture. Coded a proof-of-concept.

PIC14 Compiler
Developed a simple C-like language, compiler, and assembler suite for the PIC14 architecture. Grammar built with full recursive descent parsing and turing completeness.

1-axis balancing robot project
Engineering project to balance an inverted pendulum with an accelerometer and gyro. Worked with drive systems, PIC/AVR MCUs, and Kalman filters. Embedded programming, circuit design, electrical.

Real-time audio analysis and synthesis
Experiment to determine the frequency of an input signal, combining Fourier and Wavelet analysis, and to sequence a MIDI representation. Dealt with digital signal processing, vector optimizations, hardware interfacing, and UI design.

TECHNICAL ABILITIES

- Rails development.
- Modern approach to (X)HTML, CSS, and Javascript.
- Agile & sustainable development processes.
- *Languages:* C, C++, Objective-C, Ruby, Perl, PHP, Java, Flex/ActionScript, Python, Erlang, and others.
- Development for Mac OS X, Linux, embedded PIC/AVR.
- System administration, web development, design.
- Proficient with other modern web frameworks, Swing interfaces, OpenGL, distributed processing, and simulation techniques.

For a design portfolio please see: <www.carsonbaker.org>. References attached, or available upon request.