

# Adam DiCarlo

adam@bikko.org

## Accomplishments

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- Designed and implemented a multi-player game engine with tile editor and world editor, using client-side prediction techniques for responsive Internet playability
- Parallelized a cellular automaton in C using pthreads, achieving multicore speed-up
- Wrote a parser, type-checker, compiler, and rudimentary optimizer in Standard ML for a subset of the Java programming language
- Implemented a genetic algorithm in C that evolves a strategy using crossover, mutation, and fitness selection for a virtual agent who cleans a messy office
- Created a Win32 application that uses a webcam for time-lapse photography
- SpeedHack 2007: Developed and submitted a multi-platform computer game adhering to competition rules within a 72-hour deadline
- Wrote a VBE 2.0 high-resolution graphics library in 32-bit protected mode DOS
- Designed and constructed a dashboard mounted auxiliary input jack to interface a portable MP3 player with a car stereo

## Experience

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- 10/08–3/09 **Portland State University and neutralspace, Inc.**
- Wrote Reminder Alarm and relative date formatter for Android application; configured Linux server for multiple VNC-GNOME sessions
- 5/08–9/08 **IBM Linux Technology Center**
- Tested the UXSP YUM Repository Generator on System x servers
  - Edited and co-wrote the UXSP project's instructional white paper
- 6/07–12/07 **BonJones**
- Fixed bugs in and extended a PHP web application
  - Simplified and debugged another PHP code base by making abstractions consistent, refactoring similar code, and creating MySQL views
- 11/06–5/07 **F2 Incorporated**
- Developed an AJAX/SOAP phone number availability finder
  - Created a Drupal e-commerce module to reserve specific product instances for a period of time before check-out
- 4/06–9/06 **IBM Linux Technology Center**
- Designed and coded REPO, a document repository with a PHP front-end that allows wiki-like text file editing, file locking, in-browser PDF preview, and uses LDAP, Subversion, and PostgreSQL for its back-end

## Skills

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PHP · JavaScript · CSS · XHTML · AJAX  
MySQL · Drupal · Linux system administration · Bash · Git · Subversion · C · C++  
Haskell · WordPress · Canvas · Python  
Google Android SDK · POSIX threads

## Awards

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First-place “Technical Innovation for an Intern” at IBM's Pacific NW TechConnect 2006 for REPO · Misc. scholarships

## Education

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- **Bachelor of Science**, Cum Laude, Computer Science, 2009, Portland State University
- Homeschool, focused on self-directed, experience-based learning