Jordan A. Lewis

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Work Experience

Senior Software Engineer, Knewton   Feb. 2013-Present
- Led and completed a large-scale redesign of the in-house framework supporting the company's real-time production machine-learning model infrastructure, resulting in a 50% cost reduction and improved latency, throughput and overall system simplicity over 6 months
- Created audit and management system for model parameters learned offline
- Work with data scientists to profile, instrument and optimize critical model code
- Design, implement and maintain a central model-running service along with architecture of supporting backend databases, caches, auditable logs and other metrics and instrumentation

Software Engineer, Knewton   Sep. 2011-Feb. 2013
- Responsible for design, implementation, maintenance and optimization of core backend database services in a Java-based, AWS-hosted microservice-style distributed system.
- Created a scalable versioned graph database using Cassandra as its backing store
- Created a service to manage, persist and serve a complex set of domain objects for internal use.

Intern Software Engineer, RethinkDB   December 2010
Homework/Lab grader, CMSC 15400/15100, The University of Chicago   Spring, Autumn 2010
Intern Software Developer, The Manticore Project, The University of Chicago   Summer 2010
- Continued development on and maintained an Objective-C++/Cocoa log file visualization program for Manticore, a functional parallel programming language and compiler

Sys. Admin., Computation Institute, The University of Chicago   Aug. 2008-Sep. 2009
Software Developer, Econnectix, Chicago, IL   Jan. 2008-Apr. 2009
Software Developer, Vim, Google Summer of Code,   Summer 2008-Autumn 2010
- Designed and implemented undo tree persistence, one of the Vim community's most requested feature additions (undos/redos automatically saved upon closing and restored upon reopening a file)[†]
- Continued to support the feature in spite of difficulties getting it pushed upstream, continued development via a separate channel until eventual upstream inclusion

Education

Bachelor of Science, Computer Science, The University of Chicago   2011

Other Projects

Lisp implementation in Factor[†]   April 2015
Persistent union-find implementation in Clojure[†]   January 2013
Tensor Rundown, a multiplayer 3D racing game[†] The Univ. of Chicago, CMSC 23800   Spring 2010
Prototype SML-like Module System[†] The Univ. of Chicago, CMSC 33600   Winter 2010
Simple MIPS Simulator[†] The University of Chicago, CMSC 22200   Autumn 2009
Simple RDBMS,[†] The University of Chicago, CMSC 23500   Spring 2009
- Collaborated with the class to build a simple RDBMS in C from the ground up, including a B-Tree backend, a database virtual machine, a SQL-to-VM code generator, and a simple shell to interact with the system

TCP-like implementation; IP router[†] The University of Chicago, CMSC 23300   Autumn 2008
- In a two-person team, implemented a TCP-like reliable transport protocol called STCP on top of a simulated unreliable network layer, and an IP router with proper support for ARP, ICMP, and routing directly over Ethernet packets

Skills

Languages: Java, Python, Clojure, C/++, shell, Scala, Golang, OCaml, Factor
Systems: Cassandra, Kafka, AWS, Redis, Zookeeper, Mesos/Marathon, SQL
Tools: Vim, git, Docker, Splunk, Graphite

[†]Source code available at http://github.com/jordanlewis/, or upon request