Timothy S. McKenna

Jamaica Plain, MA
mckenna.tim@gmail.com
http://mckennatim.github.io/mckennatim
(857)498-2574

Career Objective:

Having written software as an ancillary part of being a high school teacher, cognitive systems researcher and building contractor, I am looking to break in to a full time position in software development. To that end, I have actively been building a software portfolio while doing a bit of consulting mostly related to my prior construction experience.

Technologies that I am actively using on a daily basis in that portfolio include:

Agile Methodologies	HTML5	ServerSentEvents
ReSTful API's	CSS3	Responsive Web Design
Javascript	MySQL	ReactJS
AngularJS	Linux/LAMP	Webpack
NodeJS	Nginx	Babel
MongoDB	Arduino/AVR C	Gulp
Git	Web Sockets	

Additionally, I have prior experience in:

PHP	AutoCAD Lisp	AJAX
jQuery	Matlab	Test-driven development
jQuery Mobile	MediaWiki API	

As well as academic coursework using

C++	Ruby on Rails	SAAS
Java	R	Python

EXPERIENCE:

10/2011-PRES

Portfolio Development – 20 hours a week devoted to building a portfolio of software in technologies with good job prospects and active user communities. Examples of portfolio projects include mobile-first web development of:
- A shared list app using websocket push technology and the MEAN stack
- And IOT project in production as a home HVAC control and optimization system using microcontroller based circuits connected to a cloud Rest API with a front end user interface that runs on any device.

Various consulting projects – part time
- Design development, AutoCad plans, structural engineering and project management for residential rebuild in Portland, Oregon.
- Alternative energy system design for low temperature solar, radiant domestic hot water and hydronic heating system
- Construction Management - energy efficient housing retrofit.
- Design and development of home automation systems with a long term view of turning it into a business

Instructor-Humanities, Math and Science / On-line curriculum developer   **10/2005-10/2011**

Parkway Academy of Technology &Health, a one laptop per student urban public high school
- Produced an online version of 4 Humanities courses which included course content and repository of student work and projects.
- Created software tools and technology solutions for classroom use
- Prototyped assessment framework and technology toolset for creating reading comprehension questions and vocabulary resources for source articles from the Humanities courses.

- Working with the humanities team, developed courses to meet MA standards in ELA and World History II and ELA and U.S. History II.
- Working with the National Writing Project, engaged in a year-long research project on teaching writing in a content driven Humanities class.
- Research in the ways in which online coursework changes the nature of learning.
- Incorporated the use of personal response systems in the classroom for instant item analysis allowing for ongoing improvement in reading comprehension.
- Developed a case study approach to frame Historical events and ideas based upon shared characteristics.
- Developed and co-taught a pilot course for 9th graders combining Algebra and Physics. The hypothesis was that math is the language of physics and that taught in tandem both would make more sense to young students.
- Taught Geometry and Algebra/Physics using exploration outlines created in Geometers' Sketchpad
- Developed scripts and apps using (MediaWiki API, JQuery, AJAX, JavaScript, HTML5, MYSQL, PHP)

Research Assistant
Boston University dept. of Cognitive and Neural Systems, Technology Lab 08/2001-09/2005
Modeling cognitive systems using MATLAB and JAVA for:
- Neural network models of visual recognition using satellite imagery and GIS
- Predictive models of HIV resistance to protease inhibitors using genome data
- Models of memory and learning
- Auditory models of phoneme recognition using Hidden Markov models

In school full time (obtaining an undergraduate degree in Physics) 01/1998-08/2001

Home Builder 10/1976-12/1998
President of Site Built Systems, Inc. – team leadership, project management, competitive bidding
- Created over $20 million in new construction, mostly urban infill affordable on abandoned or difficult contiguous sites, averaging twelve 1 and 2 family houses.
- Implemented Computer Aided Design and Manufacturing CADCAM technology using AutoCAD Lisp integrated with SQL database for estimation, production and job-cost accounting
- Performed marketing and sales, community relations, surety relations
- Oversaw accounting, worker training and development
- Sitework, layout and construction; project management and supervision.

EDUCATION
Throughout my undergraduate and graduate training I have had a strong concentration in computer science including classes in Algorithms and Data Structures, Artificial Intelligence, Machine Learning, Object Oriented Design in C++ and Java for Distributed Computing.
- PhD candidate in Cognitive and Neural Systems, Boston University (ABD)
- MA in Cognitive and Neural Systems, Boston University - 2003
- BS in Physics, University of Massachusetts, Boston (2000)

CERTIFICATIONS, ADDITIONAL COURSES and AFFILIATIONS
- Initial MA DESE certification in English (8-12) and Mathematics (8-12), preliminary certification in History (8-12), Mathematics (5-8) and English As A Second language (8-12)
- Member of ReactJS, GDG, jQuery, HTML5, edXGlobal Community, BostonJS, Boston Hardware Startup, Hacks/Hackers, Boston Front-End Developers, Drinks on Tap, Angular, Meteor and Ember Boston Meetup Groups.
- edX and Coursera certificates in Circuits and Electronics 6.002x, CS-169.2x Software as a Service, ET3034TUx Solar Energy, Introduction to Power Electronics UC Boulder
- MA Construction Supervisors License, master carpenter