# Matthew David Litwin

**Software Enginering Manager and Lead**

* Manange Engineers
* Design and Implement Front-end and Back-end Systems
* Math Education Software

## Experience / Work History

### McGraw Hill Education

#### Software Engineering Manager

* Lead for a diverse [Full Cycle](https://medium.com/netflix-techblog/full-cycle-developers-at-netflix-a08c31f83249) engineering team
* Backend, front-end, infrastructure and support.
* Management of full time employees, contractors, and vendors.

#### Software Engineering Lead

Web Sketchpad

HTML5 viewer for the Geometer's Sketchpad. Interactive content in MHE products.

### KCP Technologies

03/22/1999 to 07/31/2012

Junior programmer to Senior Software Engineer

* Technical project management, several direct reports
* C, Windows MFC, and Mac Objective C programming on The Geometer's Sketchpad
* Mac and Windows programming on Fathom™ Dynamic Data™ Software with an in-house cross-platform framework

## Skills

* Practices: Scrum, Agile Programming, XP, Pair Programming
* IDEs: XCode, Visual Studio
* Source Control: git (svn, CVS)
* Issue Tracking: JIRA, Bugzilla, Trello
* Content Management Systems: Confluence, MediaWiki

## Programming Languages

* HTML5/JavaScript/typescript Application Development
* C / C++
* terraform
* node, Perl, PHP, bash

## Projects

## Smartbook 2

[Smartbook 2](https://www.mheducation.com/highered/connect/smartbook.html) is the HTML5 update / rethink of older (flash based) Smartbook product.

My team created authoring application for augmenting ePub content with rich metadata, enabling adaptive end-user experience.

## The Geometer’s Sketchpad

The Geometer's Sketchpad is an interactive Dynamic Geometry™ application, available for Windows, Mac, and iOS. I worked on the most recent major version, coding considerable portions of the Windows front end, also implementing core geometric and utility algorithms. I am also the tech lead for the development of an HTML5/JavaScript viewer for Sketchpad documents.

## Fathom

Fathom was a Dynamic Mathematics application for teaching Data Analysis and Statistics, available for Windows and Mac. I coded using an in-house cross-platform C++ framework, including HTTP download components, and mathematical algorithms (such as multiple linear regression, and primality testing).

## Education

University of California, Santa Barbara - MS Mathematics - 1997 University of California, Berkeley - BS Mathematics - 1994