

# Learning to Learn

How to find, learn, and master new skills,  
languages, libraries, and frameworks

# Lara Newsom

- Source Allies Software Consultant
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- [Linkedin](#)



# Background

- B.S. Botany - Iowa State University: 1997
- B.F.A. Painting - University of Iowa: 1999
- M.F.A. Art/Integrated Media - California Institute of Arts: 2003
- Graphic/Web Design Contractor - Newsom Design: Los Angeles: 2003-2007
- Handmade Pretties (Crafting Business) - Los Angeles/Des Moines:  
2001-2018
- Freelance Graphic/Web Design - Des Moines, Iowa: 2007-2014
- Software Developer - Advantage 2000, St Louis, MO: 2014-2018



# Iowa State University of Science and Technology

hereby confers upon  
**Lara Michelle Newsom**  
the degree  
**Bachelor of Science**

with all the Honors and Distinctions belonging to this Degree in consideration  
of the satisfactory completion of the Course of Study prescribed in

**Liberal Arts and Sciences**  
Major in Botany

Given at Ames, Iowa, on the twentieth day of December,  
one thousand nine hundred and ninety-seven.

*Dawn J. Hawlin*

President of the State Board of Regents



*Martin L. Jischke*

President of the University



# The University of Iowa

ON THE RECOMMENDATION OF THE FACULTY OF THE

## College of Liberal Arts

AND UNDER THE AUTHORITY OF THE BOARD OF REGENTS  
THE UNIVERSITY OF IOWA HAS CONFERRED THE DEGREE OF

Bachelor of Fine Arts

With Honors in Art

UPON

Lara Michelle Newson

WHO HAS HONORABLY FULFILLED ALL THE REQUIREMENTS PRESCRIBED  
BY THE UNIVERSITY FOR THIS DEGREE

AWARDED AT THE UNIVERSITY AT IOWA CITY IN THE STATE OF IOWA  
THIS SEVENTEENTH DAY OF DECEMBER, NINETEEN HUNDRED AND NINETY-NINE.

*Owen J. Keeler*  
PRESIDENT OF THE STATE BOARD OF REGENTS



*Mary Lee Clement*  
PRESIDENT OF THE UNIVERSITY

*Linda Macion*  
DEAN OF THE COLLEGE

# California Institute of the Arts

The Trustees of the California Institute of the Arts  
upon the recommendation of the Faculty confer  
upon

Lara Michelle Newsom

The Degree of

Master of Fine Arts

Award with all pertaining rights at Valencia, California,  
On the 16th day of May, Two Thousand and Three.

Steven D. Levine

President

Nancy Nuttemore

Registrar

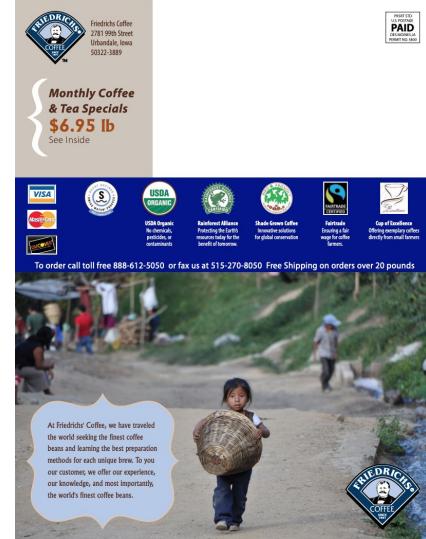


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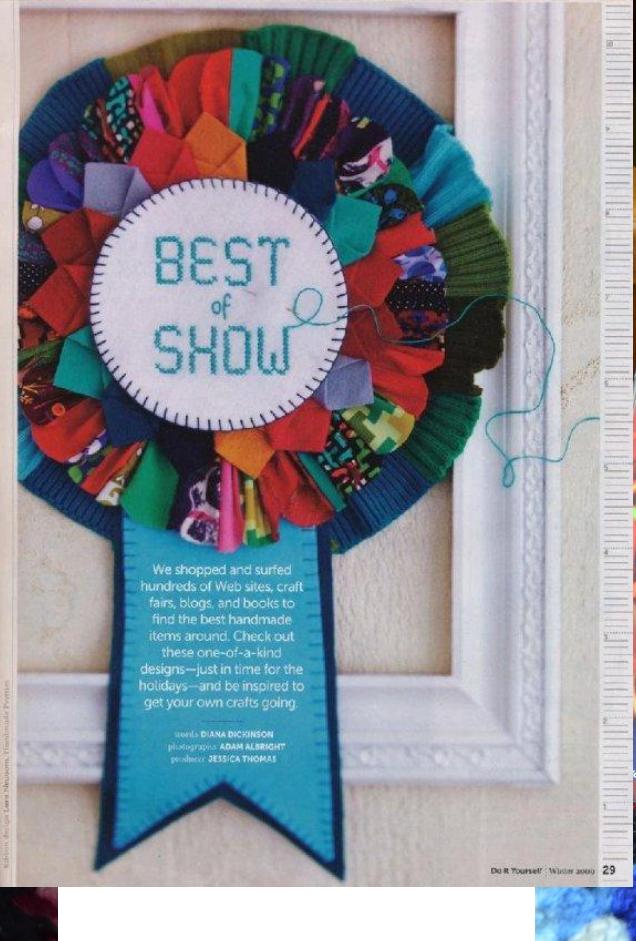
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Starting Over  
Again Without  
Going Back to  
School... Again.





# Google

- A well phrased Google search can yield good answers, while vague or misdirected searches will yield nothing.
  - My biggest hurdle in learning how to code was learning how to refer to the parts of code.
  - Pay attention to the words used in accepted responses. Often they are more specific and when searched will give better results.
  - Now when I write answers to questions, I try to write them so that beginner me would be able to understand or find more information.
- Google exact error messages
- If all of your answers suggest a different library, language, or framework, you might need to rethink what you're doing.
  - My first app was a pile of spaghetti code written in Visual Basic that I inherited from the previous developer. Every search yielded answers in C# that I translated to VB.

# Read the docs

- Some docs are better than others, but most will at least tell you what you can expect to get out of a method or type. Learning to leverage docs can save a lot of Google time.
  - Baeldung “Back to Basics” tutorial, and the docs in general.
  - RxJs docs have an Operator Decision Tree that will winnow down the exact operator to pipe to yield the results you want.
  - MDSN docs on Lists/Dictionaries/Arrays list all of the available methods for each type.
- Some docs offer Tutorials to get you started
- When learning how to test a framework, reference the docs first
  - Even if you opt for a different testing framework, the docs have clues to get it working

# Dig Into the Source Code

- Open source is awesome, and a lot of frameworks and libraries are open source.
  - Many libraries and frameworks are hosted on Github, fork the repo and dig into it!
- For libraries that are not open source, specifically libraries that load files onto the client, you can often get some visibility into how the code works by downloading the code and unminifying it using a tool like [Unminify](#)
- For libraries installed into your code, follow the classes back to their source definitions. (VS Code - F12). At minimum you can see if the class extends a known class or what dependencies it has.

# Find a Video Tutorial/ Find a Blog

- Most major frameworks are well represented on video tutorial sites like [Pluralsight](#).
  - If you have an MSDN subscription through your client, you are eligible for a 6 month free subscription to Pluralsight.
  - If not wait for special pricing, they run \$100 off specials all of the time.
- Find blogs written by the actual developers working on a framework.
  - I find these by following podcasts and Tweets

# Online Code Camps

- [Free Code Camp](#) - free online coding boot camp
- [Code Wars](#) - free online coding challenges
- [Hackerrank](#) - The 30 day code challenges to learn new types and algorithms
- Some resources to teach kids how to code are great at teaching anyone ho

# Websites to teach kids (and adults) how to code

Code.org - [website](#)

CodeAcademy.Com - [website](#)

AppInventor.mit.edu - [website](#)

Crunchzilla.com - [website](#)

GetHopscotch.com - [website](#)

CodeMonkey.com - [website](#)

# Make a Project

- The hands down best way to truly learn and understand a new skill, is to practice.
  - Create a project that mimics scenarios you have encountered in previous jobs.
  - Volunteer for a Hack-A-Thon
  - Don't be afraid to reach out for help or post questions on Stack Overflow
- Don't worry that you are writing perfect code. Refactoring exists for a reason.
  - My deepest understanding of how things work comes from digging in and hacking away until I can get something to work.
  - Once I get something working, I see how I can break it. Breaking code is illuminating when trying to understand exactly which dependencies do what.
  - Console Log, Debug, Step through everything to see what happens where.

# Leverage Twitter and Social Media

- Most modern frameworks and languages have official Twitter handles.
  - Once you've followed the framework/language/library, Twitter will suggest other people to follow. I check out their page to see what they are tweeting, if I find it useful I follow them
- Follow Local Conferences and the speakers they tweet about
  - Conference speakers tend to go to several conferences a year. They will tweet about other conferences and other speakers.
- Follow local meetups and local developers
- Follow companies who are active in supporting the dev community
- If you find one person particularly helpful, look at who they follow and follow the ones you find interesting.
  - It's easy to unfollow or block people that get annoying.

# Some of the People I follow on Twitter

@joshbloch - Java

@AdamBien - Java

@venkat\_s - Java

@starbuxman - Java

@MitchelSellers - .Net

@Mattferderer - .Net

@davidpine7 - .Net

@aaronfrost - Angular

@josepheames - Angular

@DeborahKurata - Angular/.Net

@ladyleet - rxjs

@BenLesh - rxjs

@brian\_d\_vaughn - react

@troyHunt - security

# Conferences

- Conferences curate their sessions into topics relevant to what people want to learn. Follow the speakers on social media.
  - If you aren't able to attend the conference, look at the schedule and see what topics are being presented. Look up the speaker and follow them on social media. Speakers will often link to their conference talks.
  - If you do attend, even if a session is over your head, write down words to look up later.
- Talk to fellow attendees to learn about their experiences.
  - Talking to other attendees made me realize how much I had in common with them.
- Talk to vendors. Pick up materials to research later
  - Some vendors send their actual devs to talk to people at conferences. And they are usually there because they are relevant in some way.

# Conferences

[Prairie.code\(\)](#) - Des Moines

[No Fluff Just Stuff](#) - Des Moines

[DevUp](#) - St Louis

[Nebraska.code\(\)](#) - Omaha

[Iowa Code Camp](#) - DMACC FREE!

[dsmAgile](#) - Des Moines

[That Conference](#) - The Dells, WI

[NgConf](#) - Salt Lake City

[RxJsLive](#) - Las Vegas

[NgDenver](#) - Denver

[StrangeLoop](#) - St Louis

[Connectaha](#) - Omaha

[React Conf](#) - Las Vegas

[NEJS Conf](#) - Omaha

[Code PaLOUsa](#) - Louisville

# Podcasts

- Most major languages and some frameworks and libraries have podcasts dedicated to them.
  - Listening to podcasts gives exposure to the way people talk about the code which makes it easier to make efficient Google searches.
  - Many podcast guests will discuss where a framework is going or gotchas that keep people from adopting it.
- Podcasts often announce upcoming conferences and events

# Podcasts (I Listen To)

Adventures in Angular

Developer On Fire

Eat Sleep Code

JavaScript Jabber

Real Talk Javascript

Base.cs

# User Groups and Meet Ups

- User Groups are like free mini conferences.
  - Often the speakers at user groups give the same talks they have given at conferences.
  - They are often more intimate giving better access to the speakers for questions
- This is a great place to network and meet local developers who share your interests
  - I literally wouldn't have my job if it weren't for the .Net Meetup group.
- Have I mentioned they are FREE to attend?
  - However they are not free to produce, so be sure to RSVP and CANCEL your RSVP if you are not able to attend.

# Ask Questions

- Ask questions.
- It can be really intimidating to ask questions, because it puts us in a vulnerable position. Being willing to be vulnerable opens a path to learning that is otherwise not available.
- There are very few problems in software development that have not been encountered before.
- Even senior developers reach out for difficult problems

This image shows a collection of handwritten notes and diagrams from several spiral-bound notebooks. The notes cover a wide range of topics, likely from a computer science or software engineering course. Key subjects include:

- Databases:** Notes on Entity Framework (EF), including WHERE clauses, SELECT statements, and various query examples.
- Security:** Handwritten diagrams illustrating session hijacking, token-based authentication, and various types of attacks like SQL injection, XSS, and Clickjacking.
- Web Development:** Notes on PWA support, service workers, push notifications, and modern browser features like Web Workers and Service Workers.
- Networking:** A diagram showing the flow of data between a client and a server, involving IP addresses, ports, and protocols like HTTP and HTTPS.
- File Systems:** Notes on file paths, file operations, and file system structures.
- Cloud Computing:** A diagram showing the layers of a cloud architecture, from the user interface to the underlying infrastructure.

The notes are written in blue and black ink, with some diagrams in green. The handwriting is cursive and varies in size and clarity across the different pages.

# Take Notes

- Take all the notes: during conferences, during user groups, during meetings.
  - Writing things down helps to remember them even if you never go back and read your notes.
  - People notice when you write things down. Clients notice.
- Write down words, websites, libraries, websites, anything you want to look up later.
  - Take a few minutes after a conference or meeting to review those notes to bookmark websites or look up words.

# User Groups

CIJUG

Web Geeks

dsmJS

Experiencing UX - Central Iowa

AWS Des Moines

Iowa .Net User Group

DevOps DSM

Des Moines Lady Dev

Follow the Source Allies #dsmtech Slack channel for daily updates!

# Give Back to the Community

- Answer questions on Stack Overflow
- Share useful links with teammates
- Do a tech leveling talk to share your new skills at work
- Mentor a co-worker in learning a new skill
- Speak at a conference or meetup
- Start a user group
- Write a blog post