

EDUCATION

University of Wisconsin - Madison

2016

Bachelors of Science in Mathematics & Computer Science

Graduate coursework

Mathematics: Nonlinear Optimization; Computational Mathematics; Real Analysis; Algebraic Topology
Computer Science: Advanced Machine Learning; Advanced Algorithms; Computer Vision; Computational Complexity

Undergraduate coursework

Mathematics: Mathematical Logic; Topology; Abstract Algebra; Real Analysis I & II; Combinatorics;
Probability Theory; Linear Algebra; Differential Equations; Discrete Mathematics
Computer Science: Computer Networks; Algorithms; Computer Architecture; Artificial Intelligence; Compilers;
Operating Systems; Cryptography; Data Structures; Machine Organization; Digital Systems

PROJECTS

Nonlinear Optimization Library	MATLAB library of various nonlinear optimization algorithms. (2015)
ML/Signal Processing Library	MATLAB library of machine learning/signal processing algorithms. (2016)
Computer Vision Applications	A collection of MATLAB computer vision applications. (2016)
Topological Data Analysis	Researching ways to incorporate multiresolution persistent homology representations into probability models. (in progress)
DNN Mathematical Framework	Researching applications of harmonic analysis, Riemannian geometry, and dynamical mean field theory towards developing a rigorous mathematical framework for deep neural networks. (in progress)
Deep Autonomous Driving	Researching varying deep reinforcement learning architectures for the planning problem in autonomous driving systems. (in progress)
Python ML Library	Python library of various machine learning systems/algorithms. (ongoing)
C++ Algorithms Library	C++ library of textbook algorithms (CLRS, K&T, TAOCP.) (ongoing)
Big Solution Manual	Compiling solutions to problems from a large number of the canonical mathematics and computer science graduate-level textbooks. (ongoing)

For more information on these projects and many others, visit my personal website: clarkzinzow.me

EXPERIENCE

Benefit Concepts, Inc.

January 2016 - Present

Technical Consultant/Web Developer

Whitewater, WI

- Provided consultation on HR/payroll software systems, cloud services, and computer security.
- Researched and implemented viable cloud solutions for the company.
- Set up and maintained company's encrypted e-mail system via Microsoft Azure RMS.
- Currently working on a new company website. (in progress, not deployed)

100State/100Health

July 2014 - January 2016

Software Engineer/Web Application Developer

Madison, WI

- Worked on software/web app development projects focused on health IT and the state government.
- Learned how to use agile software development frameworks for managing product development.
- Gained valuable experience developing with JavaScript and many JavaScript frameworks.
- Created applications using modern technologies such as: AngularJS; Node.js; MEAN stack; continuous integration.
- Learned many modern software development practices from former Epic Systems software engineers.

Division of Information Technology at UW-Madison

June 2014 - September 2014

Web Developer

Madison, WI

- Performed web development contract work for a variety of UW-Madison departments.
- Created websites, WordPress plugins and themes, and provided general website maintenance.
- Completed projects using: WAMP/MAMP stack; PHP; JavaScript; jQuery; SQL; many PHP/JavaScript frameworks.
- Learned test-driven development, source control, issue tracking, and good programming practices.

TECHNICAL SKILLS

Languages: Java; C++; Python; MATLAB; JavaScript **Technologies:** Git; Eclipse; Visual Studio; PyCharm