

Theodore S. Lindsey

Education

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MS, Computer Science, *The University of Kansas*, Lawrence, KS, 3.7.

Dec 2016

MA, Mathematics, *The University of Kansas*, Lawrence, KS, 3.6.

May 2014

BS, Mathematics, *Principia College*, Elsah, IL, 3.5.

Jun 2011

Computer Tools

Languages: Bash, C++, CSS, HTML, \LaTeX , Matlab, Python, SQL

Frameworks/Tools: Alteryx, Bokeh, D3.js, Dash, Docker, Git, RegEx, Sci-Ki, Tableau

Experience

Data Scientist / BSA, *Daimler Trucks NA via Xtreme Consulting*. **May 2016–Present**

- Identified and worked with business units to build solutions for several machine learning problems.
- Designed POC experiments to determine viability of projects.
- Proposed and started \$700k project with supply chain group to reduce stock shortages with neural net classifier.
- Four presentations to C-level management.
- Project Manager, developer for web service and hybrid app for room booking. Launched Mar 2017.

Rule Induction System, *Project for Masters Thesis*. **2016**

- Familiarized myself with intricacies of rule induction system from published articles.
- Implemented a rule induction system (IRIM) given my understanding from articles.
- Proposed improvements to IRIM based on observations of algorithm performance and limitations.

TF-IDF Search Engine, *Information Retrieval Class Project*. **Spring 2016**

- Designed and built a search engine using the TF-IDF vector space model.
- Integrated relevance feedback from user into ranking algorithm.
- Implemented a web crawler to index specific websites.
- Served as scrum master. Helped team to coordinate tasks and lead discussions of progress that needed to be made and of work that remained to complete.

Graduate Teaching Assistant, *The University of Kansas*. **2011–2016**

- Instructor of record for Intro to Programming (C++), Software Engineering lab, Calculus I, and others.
- Responsible for preparing lecture material, creating homework assignments, lecturing, and grading.

Student Manager, Tech Advisor, *Principia College*, Elsah, IL. **2009–2011**

- Managed observatory, arranged scheduling, improved observatory operation and workflows.
- Organized observatory club functions, advised faculty on equipment purchases for observatory.
- Served as liaison between faculty and student operators.

Presentations & Publications

Interesting Rule Induction Module: Adding Support for Unknown Attribute Values. M.S. thesis defense, The University of Kansas, Lawrence, Kansas. December 2, 2016.

Decision Trees & SPSS Modeler Usage. Invited Presenter, Daimler Trucks North America Data Consortium #8, Portland, Oregon. August 3, 2016.

On the Kalman Filter and Its Variations. M.A. thesis defense, The University of Kansas, Lawrence, Kansas. April 18, 2014.

Ink-constrained halftoning with applications to QR codes. Mathematical Modeling in Industry XVII, Minneapolis, Minnesota. August 16, 2013.

Orthogonality Throughout Mathematics. MAA-MOMATYC contributed talk, Columbia College of Missouri, Columbia, Missouri. April 2, 2011.

Projects

- Multimedia Tagging and Recommendation System**, *Personal Project*. **2017**
- Designed in-filename tagging system for multimedia files (photos and videos).
 - Designed inverted index to quickly perform queries on files in the file system.
 - Built GUI for display of multimedia files matching user-specified queries.
 - Built user profile given ratings of opened files.
 - Evaluated tags and involved actors to determine files likely to be enjoyed by the user.
- Implementation of Set (card game)**, *Personal Project*. **2017**
- <http://theodorelindsey.io/Games/Set>
 - Designed and built implementation of the card game Set in html5/css/js.
- Rubik's Cube Face Recognition**, *Computer Vision Class Project*. **Fall 2016**
- Built system for recognizing 9x9 grid of cubies on cube face and determining the colors of those cubies.
 - Used Python's numpy, OpenCV, Pillow.
- Recipe Management & Cookbook Application**, *Personal Project*. **Summer 2015**
- Re-architected application structure to address shortcomings encountered in previous version.
 - Developed and tested a digital cookbook application in Python and TkInter.
- Minimal Linux Shell**, *Operating Systems Class Project*. **Spring 2015**
- Implemented a shell for linux.
 - Supported background execution, I/O redirection, and a few built-in commands.
 - Could execute systems calls, start processes with cli parameters, and manage running processes.
- Recipe & Cookbook Organization App**, *Software Engineering Class Project*. **Fall 2014**
- Team lead for a class project in which we wrote a cookbook application.
 - Responsible for project architecture, scheduling, module integration, and spec authoring.
- Kalman Filter Exposition**, *Project for Master's Thesis*. **Spring 2014**
- Familiarized myself with Kalman filter and general filtering techniques.
 - Implemented a simple Kalman filter simulation for exposition.

Honors & Awards

- Finalist for the *Florence Black Teaching Award* (The University of Kansas) **2013–2014**
- National Science Foundation Graduate Research Assistant (DMS-1108884) **2013**
- Robert and Mary Keely Mathematics Award (Principia College) **2011**

Interests

Home automation: Atmel AVR (Arduino)-based automation.

Prop manufacturing: Mold-making, casting, fiberglass and resin, sculpture.

Multicopter UAS: Building and programming RC quadcopters