Theodore S. Lindsey

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Education

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**

Computer Tools

Languages: Bash, C++, C# .net Core, CSS, HTML, LaTeX, Matlab, Python, SQL

Frameworks/Tools: Alteryx, D3.js, Docker, Git, Numpy, Plotly, Pandas, React, RegEx, Scikit-Learn, Tableau

Experience

Full Stack Data Scientist, *Daimler Trucks North America*. **June 2018–Present**

- Several presentations to C-level management.
- Managed, mentored, and provided projects for four MECOP interns and one graduate student Data Scientist over two summers.
- Migrated dispersed department C# .Net Core code into modular and standards-focused library. Standardized various ODBC Connection techniques, security practices, and LDAP integrations for use in all department projects. Brought code & techniques into IT compliance.
- Organized first annual company-wide data conference with 300 attendees, including presentations from Operational Board and CIO. Organize monthly ML symposium and quarterly data mini-conference.
- Identified and executed on project to predict paint warranty claims theoretically resulting in $2.5m savings annually.
- Designed and implemented data pipeline to forecast part manufacturing plant capacity for upcoming year. Results are used to form purchasing and replacement strategy for multi-million dollar metal presses and other machine shop equipment.

Data Scientist, *Daimler Trucks NA via Xtreme Consulting*. **May 2016–June 2018**

- Proposed and executed project with supply chain group to preempt and reduce stock shortages using random forest classifier. Evaluated viability of recurrent neural net. Approximately $500k in savings annually.
- Piloted CI/CD strategy including Docker adoption.
- Piloted standardized machine learning platform. Settled on Data Bricks in Azure.
- Project Manager for web service and hybrid app for room booking.

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. Coordinated tasks and lead daily check-ins.

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

- Instructor of record for Intro to Programming (C++), Software Engineering lab, Calculus I, and others.

Presentations & Publications

SQL Query & Procedure Optimization and Debugging Invited Presenter, Daimler Trucks North America Data Consortium #13, Portland, Oregon. May 14, 2019.

Closing Feedback Loops & Driving Data Onboarding with Live Reporting Invited Presenter, Daimler Data Day, Portland, Oregon. February 26, 2019.

Paint Warranty Claim Prediction & Data Robot Service Evaluation. Invited Presenter, Daimler Trucks North America Data Consortium #11, Portland, Oregon. November 2, 2018.

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*. **2018**

- Designed in-filename tagging system for multimedia files (photos and videos).
- Designed inverted index to quickly perform tag & category 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

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