Sol Vitkin

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Profile

I am fascinated by data-driven approaches to modeling human behavior. My statistical training and commitment to collaboration and strong software engineering principles can be applied to any development challenges.

Experience

05/2019—Present
New York, NY

Software Engineer at O P Solutions (C#, ASP.NET)
Currently building an API and a package to integrate it with existing law firm software, to be able to deliver law upgrades to users. Maintain existing project that scrapes U.S. Patent and Trademark Office data and integrates it with client data. Leading the transition to test driven development.

10/2016—09/2018
Washington, DC

Data Scientist at Science & Technology Policy Institute (R, Shiny, Python)
Developed and deployed an R Shiny application, analyzing the U.S. Federal Government's portfolio of earth observations. Application is beginning to be used in multiple federal agencies. Built in-house R library and interactive tools for non-programming users to automate report generation, create data visualizations, and run interpretable regression analyses. Mentored junior researchers in best practices for coding and technical project management.

06/2013—12/2015
Rochester, NY

Research Assistant at University of Rochester (Python)
Developed Naive Bayes Classifier in project related to homophily and urban sorting. Reduced noise in data with Python. Identified and mapped distribution of racial groups on venue scale in 8 large cities.

Projects

Earth Observation Systems Explorer (R, Shiny)
Science & Technology Policy Institute
Worked with colleagues to build a Shiny application which enables non-programmer analysts to explore and understand the complexity of observations gathered during the 2016 survey of the Federal Government civil Earth observing systems. Responsible for the design and structure of the UI, the underlying data model, and the statistical analyses and visualizations derived from the data. (Code is only available to U.S. Federal Government developers.)

Leaflet Timeline Slider (JavaScript)
Personal Project
Plugin for popular JavaScript mapping application Leaflet. Users can customize the appearance of their timeline and change a map based on their own function. Effectively balances giving user control and guiding their design decisions.

NBA Trade Network (R, igraph)
Personal Project
Application that allows users to investigate and discover the relationships between NBA players that arise from trades. Clean and decoupled workflow between data scraping and reactive front-end.

3-Tensor Recommendation System (Python)
University of Rochester
Derived system that predicts which pairs of students should work together on different types of assessments. Using properties of three-way data and a unique problem formulation, program executes a co-ordinate gradient descent algorithm and generates recommendations for future interactions across a set.

Skills

Programming

Experienced: R (Shiny, tidyverse, igraph)
Intermediate: C#, Python, JavaScript, HTML, CSS
Beginner: PHP, VueJS

Databases

Postgres, SQL Server, MySQL, Neo4j

Languages

English, Russian

Education

University of Rochester

May 2016 M.S. in Data Science
May 2015 B.A. in Economics