NAVRAJ NARULA

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PROJECTS

Markov Text Generation on Poetry
Devised baseline and advanced algorithm to generate coherent text based off haikus, conduced 74-participant survey, and demonstrated an error rate of < 30% on selected outputs // Python, NLTK

Sentiment Analysis of Trending Tweets
Accessed tweets via API and categorized trending topics under positive or negative category based on self-devised scoring algorithm // Python, tweepy, Twitter API

Social Media Web Application on Travel
Built a website allowing users to create profiles and list ideal travel destinations, displayed data based on user-generated content // Python, SQL, HTML, CSS

Google Search Engine Replica
Developed client program allowing users to create, modify, and interact with an encyclopedia database, results returned based on cosine similarity score // Java

Examining Variants of Online Algorithms
Wrote a 10-page research essay discussing the standard secretary problem, expanding on its post-doc and double choice variants // Mathematical Proofs, Research

SKILLS

Programming
Backend: Python, Java, C, C++, Haskell, Shell
Data: R, SQL, NoSQL, MongoDB, pandas, OpenRefine, Shiny, Couchbase, Rackspace
Web: HTML, CSS, JavaScript, jQuery, Ruby on Rails, Flask
Platforms: Jupyter Notebook, Git, Bitbucket

Languages
English, Thai, Punjabi

FAVORITE CLASS

Computational Models of Speech + Language

EXPERIENCE

Software Engineering Intern June 2017 - Aug 2017
Quid - San Francisco, CA
Built and deployed website to display info pertaining to Quid's backup system using Docker, Flask, SQLAlchemy, and Python. Examined and unpacked contents of API to create mapping and define settings for indices on Elasticsearch. Wrote test cases to automate checks for an infrastructure engineering task. Presented my work and received recognition for delivering outputs of my code to a client.

Teaching Assistant Sept 2016 - Current
Columbia Engineering - New York, NY
* Computing in Context (Fall 2016)
* Introduction to Computing for Engineers and Applied Scientists (Spring 2017)
Help students understand control flow, functional design, and complex libraries using Python, hold weekly office hours and answer questions on Piazza, previously selected as 3 of 10 course assistants to lead lab recitations

Digital Products Engineering Intern May 2016 - July 2016
MIT Press - Cambridge, MA
Implemented functions in Python script to automate ePub creation, validated parsing errors across XML/HTML documents, bookmarked PDF textbook files, worked with Oxygen XML Editor and Sigil-Ebook platform

Data Storytelling Researcher Jan 2016 - May 2016
BU Hariri Institute for Computing - Boston, MA
Designed taxonomy and implemented a relational database in MySQL Workbench to store info about criminal case reversals, worked with faculty member in journalism dept. to deliver report on functionality of search and how to perform robust queries

Research Intern June 2014 - Aug 2014
The Center for Education Reform - Washington, DC
Maintained and updated database for U.S. charter schools, wrote blog posts, organized a downtown panel for locals interested in education reform

EDUCATION

Columbia University, New York, NY May 2018
Master of Science, Computer Science and Data-Centric Journalism
* Natural Language Processing track
* Facebook Grace Hopper Celebration Scholar
* Event Coordinator for Women in Computer Science (WiCS)

Boston University, Boston, MA May 2016
Bachelor of Science, Computer Science and English Education
* Ford Foundation Hackathon Grant Recipient
* Joan Dee and Boyd Dewey Book Awardee