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charlevr.github.io

Education

B.S. Computer Science *June 2020*
University of California, Irvine
Relevant Coursework:
Data Structures and Algorithms, Data Management, Analysis of Algorithms, Introduction to Artificial Intelligence, Computer Networks, Linguistic Data Science, Probabilistic Graphical Networks, Operating Systems

Skills

Advanced: Python (scikit-learn, pandas, nltk, PyTorch, spaCy, numpy, scipy), C++, C
Comfortable: HTML/CSS, Java, Javascript
Technologies: Git, MySQL, Jupyter Notebook
Operating Systems: Windows, Linux (Ubuntu)

Work and Research Experience

Undergraduate Researcher, Computation of Language Lab, UCI June 2019 - present

- Used python libraries such as pandas, nltk, spaCy, PyTorch, and scikit-learn to clean, process, and model a large set of text data for detecting an imitation of an author
- Applied machine learning techniques such as support vector machines and Long Short Term Memory neural networks as well as natural language processing representations such as word2vec and GloVe on large text datasets to detect imitations
- Learned experimental design with concepts such as setting a baseline, using precision, recall, and accuracy, and cross validation in order to test a hypothesis on a dataset
- Wrote experimental code in HTML/CSS/Javascript for data collection on Amazon Mechanical Turk for a new dataset, with almost $1000 in funding

Computer Science Coach, Codespeak Labs October 2019 - Present

- Mentored young students from kindergarten through 6th grade in teaching and completing coding-related projects in languages such as Python and Scratch
- Helped coordinate and teach lessons on computer programming alongside a team of passionate coaches and teachers in order to introduce computer science to a younger audience

Undergraduate Researcher, Learning and Decision Neuroscience Lab, UCI Oct. 2019 - Present

- Verified the completeness and correctness of a reinforcement learning model and a probabilistic graphical model of human decision making on various reinforcement schedules
- Read and understood a 2500+ line implementation of these models in Matlab and R

Projects

Simple Search Engine *March 2019*

- Worked with a partner to create a simple search engine on pages in the School of Information and Computer Sciences domain in Python that used cosine similarity ranked retrieval
- Uses an SQLite DB to index and retrieve data on a large set of webpages

Sudoku Puzzle Solver *March 2019*

- Implemented a simple and fast C++ program which takes a sudoku puzzle as a text file and computes a complete and correct solution
- Uses basic artificial intelligence techniques such as forward checking and backtracking to solve a constraint satisfaction problem in at most 5 seconds on the hardest puzzles

League of Legends Twitter Bot *June 2017*

- Retrieved a user's "death" count every game using Riot's League of Legends API using Python
- Used the Twitter API to post the user's death count for every game they played