Charles De Vera

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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, Machine Learning, Network Security

Skills

Advanced: Python (scikit-learn, pandas, nltk, PyTorch, huggingface, spaCy, numpy, scipy), C++, C
Comfortable: HTML/CSS, Java, Javascript (Node, React, React-Native)
Technologies: Git, SQL, Jupyter Notebook, APIs , REST, Firebase
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, Long Short Term Memory neural networks, and attention as well as natural language processing representations such as RoBERTa and GPT-2 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 an API in Python to handle HTTP requests from the experiment website to help facilitate a sound experimental setup that used about $1000 in funding

Backend Developer, TandomTV April 2020 - present
- Worked with a team of 5 other students along with Calvin Shen and Darius Fong of TandomTV as part of a project course to help create a foundation for their mobile and AndroidTV app
- Wrote a mobile app in react-native with 2 other students, integrated the app with Google Firebase and the Twitch API, and implemented authentication and a realtime database
- Added Firebase and the necessary react-native code to the existing AndroidTV app codebase so that it responds to actions performed on the mobile app

Computer Science Coach, Codespeak Labs October 2019 - present
- Mentored young students from kindergarten through 8th 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
- Created fun and interesting lessons in Python to introduce students to concepts such as machine learning, APIs, and web development

Projects

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