DAVID WANG

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EDUCATION

San Jose State University
- B.S. Applied Mathematics
- Minor: Computer Science
- Dean's Scholar (GPA 3.7+ for consecutive semesters)
  - Spring 2020, Fall 2020, Spring 2021

May 2021
GPA: 3.50

SKILLS AND TECHNOLOGIES

Languages: Java, Python, C, JavaScript, HTML, CSS
Database: MySQL, SQLite

PERSONAL WEBSITE

https://davidw-code.github.io/Website/
- Information about me, my completed projects, and current interests

Projects

School Management Program [Java, Selenium, iCal4J]
- Created a program that handles school registration and course information that is utilized by students at San Jose State University
- Parses through weekly assignment information on Canvas with Selenium to output an ICS file that uploads to iCalendar with reminders
- Automates class registration process to schedule future semester coursework

Malware Hidden Markov Model [Python, TensorFlow, SciKit-Learn, etc.]
- Created dictionaries from existing malware families (winwebsec, zeroaccess, and zbot) that is used to train HMM models to detect malware
- Performed comparative analysis between HMM's trained on different malware families and detailed possible future investigations on model training
- Models trained from one family were tuned to be able to classify other malware families with near 80% accuracy

Cipher Text Classification [Python, TensorFlow, SciKit-Learn, etc.]
- Analyzed cipher text patterns and relations through clustering EM and K-Means algorithms to find distinctions in index of coincidence and Shannon entropy
- Trained model to correctly predict and identify cipher text encryption techniques with up to 85% accuracy
- Enhanced model dimensionality with HMM training on Brown Corpus English language

Mancala Game [Java, Git]
- Lead a team of three students to design and develop a mancala game for a course project
- Constructed a fully functional mancala game following MVC pattern
- Scalable game with user interface to select number of mancala balls and game color layout

Hotel Reservation System [Java, MySQL, Git]
- Implemented a hotel management system that handles administrative and guest requests
- Constructed a relational database in BCNF format with a Swing user interface