Maxwell J. Dulin

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Professional Experience

Assistant Researcher • Gonzaga University • 2017 – Present

Designed an algorithm of taking in a word then dividing it into its corresponding syllables automatically. Uses two machine learning algorithms: a branch of a Hidden Markov Model (HMM), known as the Viterbi algorithm alongside a Genetic Algorithm to optimize the HMM.

- 92.5% accurate with NIST as the gold standard.
- Awarded the best presentation at SIRC(Spokane Intercollegiate Research Conference).
- Collaborate with a classmate and Doctor Paul De Palma through the project.

Projects

Dodgeball Website:
Built a website for the Gonzaga Dodgeball team for contact information, pictures and schedule usage in static HTML and CSS. Link: https://mdulin2.github.io/GonzagaDodgeball/Information.html

Malware Design:
Constructed an automated system that would be capable of capturing a computers clipboard for the designer's benefit.

Vulnerability Searching:
Found a vulnerability in the student website that would be able to give people access to anyone's account.

Othello A.I.:
A usable intelligence that a user can test his Othello skills against.

- Using heuristics and iterative searching, designed a top notch A.I. user.
- Competed and **won** a Gonzaga class single elimination tournament using this A.I.

Skills

- Object Oriented Design Patterns.
- Database design and SQL.
- Course work in computer security and networking.
- Good understanding of all Windows OS's and Linux OS.

- Experience with WIFI crackers, IDA, computer crackers, Wireshark and other tools.
- Understanding of basic static and dynamic tools for analyzing malware.
- Experience with analyzing security vulnerabilities in code.

- Machine Learning techniques such as neural nets, HMM's, genetic algorithms and more.
- Background in calculus and linear algebra.
- Python • C • C++ • SQL • Java
- Assembly • HTML
- Excellent public speaker.

Education

- Class of 2019 at Gonzaga University • Computer Science Major • **3.65 accumulative GPA • 3.95 GPA in CS**

Outside the Classroom

- Officer of GUMAD(Gonzaga U. Makers and Developers • President of the Gonzaga U. Dodgeball Team
- Organized and ran a wiffleball league for 10 years • Active baseball and basketball coach in the community