Sandra Nguyen

sand.nguyen9@csu.fullerton.edu | sandranguyen.com | linkedin.com/in/sandra-nguyen9

EDUCATION

California State University, Fullerton Fullerton, CA
Bachelor of Science in Computer Science December 2024

- 3.93 GPA | 4.00 GPA
- Relevant Coursework: Algorithm Engineering, Introduction to Machine Learning, Intro to Data Sci. & Big Data, Cybersecurity Fnd. And Prncp., Operating System Concepts, Data Structures, Statistics, Mathematical Structure
- Societies: University Honors Program, WiCSE, ACM, ACM-W, ASSURE-US, CIC|PCUBED, LSAMP, STEM Advantage, AWT

TECHNICAL SKILLS

- **Languages**: Python, R, C++, C#, SQL, HTML, CSS, JavaScript, NASM Assembly
- **Developer Tools**: Scikit-Learn, Unity, RStudio, Jupyter Notebook, Visual Studio Code, MySQL, Deepnote, Overleaf
- **Technologies:** Linux, GitHub, Git, AWS Lambda, Databricks, Kaggle

PROJECT EXPERIENCE

Phocrastination: A Game-Based Approach to Classifying Academic Procrastination in College Students Fullerton, CA
UROC | Dr. Doina Bein March 2023 – Present

- Researched a pervasive learning phenomenon called procrastination which affects 80% of college students with debilitating consequences to one's productivity, mental health, personal development, and overall well-being
- Implemented a rigorous Evidence-Centered Game Design process, developed a fully-functional Unity game in one summer, conducted convenience sampling and a pilot study of 80 participants, and achieved predictive validity with Cross-Validation and Support Vector Machine models

Hippocampal Ensembles Represent Sequential Relations Among an Extended Sequence of Nonspatial Events Irvine, CA
SoCal Data Science Program | Dr. Babak Shahbaba June 2023 – August 2023

- Researched hippocampal involvement in temporal event organization by analyzing neuronal activity from a rodent-based odor experiment, with potential applicability to human sequential, non-spatial memory studies
- Employed standard statistical tests, Bootstrapping and T-tests, to identify associations between individual neurons and the olfactory sense, and applied a Multinomial Logistic Regression model to decode probabilities for the neuronal ensemble at distinct theta phases–achieving an impressive predictive accuracy score of 95.52%

Data Science Analysis of Malicious Ads and Threat Detection Automation for Cybersecurity Progress Fullerton, CA
ASSURE-US | Dr. Doina Bein August 2022 – May 2023

- A novel approach to automating the analysis of malicious content on the internet to protect users against ad fraud
- Built a web scraper to extract potentially malicious advertisements from popular search engines Google and Yahoo, utilizing BeautifulSoup, a parsing library, based on highly targeted keywords–filtered for high search interest score
- Performed feature engineering and applied both Supervised & Unsupervised ML algorithms, Random Forest and K-means Clustering, to analyze a published and scraped dataset with 651,191 and 8,293 URLs, achieving a high accuracy of 91.4%
- Developed a user-friendly, ML-based web application that provides real-time URL detection and keyword analysis

CONFERENCE/PUBLICATION EXPERIENCE

S. Nguyen and D. Bein, "Data Science Analysis of Malicious Advertisements and Threat Detection Automation for Cybersecurity Progress," 2023 IEEE 13th Annual Computing and Communication Workshop and Conference (CCWC), Las Vegas, NV, USA, 2023, pp. 0695-0704, doi: 10.1109/CCWC57344.2023.10099325.

R. Gudipudi, S. Nguyen, D. Bein, and S. Kurwadkar, "Improving Internet Advertising Using Click-Through Rate Prediction," in Human Factors in Software and Systems Engineering, T. Ahram, Ed., AHFE International, USA, 2023, vol. 94, AHFE Open Access, [Online]. Available: http://doi.org/10.54941/ahfe1003772.

WORK/LEADERSHIP EXPERIENCE

Community Tutor & Student Assistant Fullerton, CA
Women in Computer Science & Engineering (WiCSE) August 2022 – Present

- Motivating peers through collaborative instruction in intro to computer science and mathematical structures courses
- Reinforcing efficient programming strategies and study habits to enhance student learning and career success
- Co-organizing weekly virtual & in-person meetings for the WiCSE community

Campus Director & Associate Program Lead Fullerton, CA
The Percentage Project August 2022 – Present

- Supporting a nationwide team of campus directors, with prior experience as a CD coordinating with six CS & ENGR departments to collect anonymous survey data on student culture, learning environment, sense of belonging, and microaggressions within their computer science community–with the aim of data-driven advocacy in a nonprofit space