Sandra Nguyen

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EDUCATION

California State University, Fullerton — Fullerton, CA
Bachelor of Science in Computer Science — December 2024
- 3.81 GPA | 4.00 GPA
- Relevant Coursework: Algorithm Engr., Artificial Intelligence, Introduction to Machine Learning, Intro to Data Sci. & Big Data, Cybersecurity Fnd. And Prncp., File Structure & Database, Data Structures, Statistics, Mathematical Structure
- Societies: University Honors Program, WiCSE, ACM, ACM-W, Theta Tau, LSAMP, STEM Advantage, AWT, CIC|PCUBED

WORK/LEADERSHIP EXPERIENCE

Information Security Engineering Intern — Remote, CA
Reddit | Security, Privacy, and Compliance Engineering (SPACE) — May 2024 – August 2024
- Created a sophisticated 4-engine prototype to webscrape URL content, implement an **SVM** model with **98%** accuracy that detects and scores malicious links in real-time, abstract third-party affiliate data, and fingerprint evolving webpage content. Utilized **Apache Airflow** for ETL, automated API ingestion, and a blend of **AWS EC2**, **PostgreSQL**, **Pypeteer**, and **Scikit-Learn** to safeguard Reddit Ads against cloaking redirection and 3rd-party modification

Community Tutor & Student Assistant — Fullerton, CA
Women in Computer Science & Engineering (WiCSE) — August 2022 – December 2024
- Co-led weekly virtual/in-person professional development workshops and socials, mentored students, collaborated with campus clubs, and arranged speaker events, Dean's Luncheons, and the ECS Diversity & Leadership Summit

PROJECT EXPERIENCE

Evergreen — Palo Alto, CA
TreeHacks | Stanford's Annual Hackathon — February 2024
- Designed a CS educational platform delivering tailored learning paths via minigames, powered by a dynamic **Sveltekit** frontend and a robust **FastAPI** plus **SQLite** backend, with a **Unity**-driven gaming interface providing real-time learning analytics and a Scikit-Learn ML model that boasts a **99.7%** predictive accuracy

Phocrastination: A Game-Based Approach to Classifying Academic Procrastination in College Students — Fullerton, CA
CSUF UROC, Design & Partnership Lab | Dr. Doina Bein, Dr. June Ahn — March 2023 – May 2024
- Developed a **Unity** game-based assessment to predict academic procrastination, integrating data wrangling, advanced data visualization tool Plotly, **Cross-Validation** and **SVM** algorithms to dissect behavioral data from student gameplay of **80+** college-level participants. Demonstrated novel application for enhancing student learning in educational sector

Data Science Analysis of Malicious Ads and Threat Detection Automation for Cybersecurity Progress — Fullerton, CA
CUSF ASSURE-US | Dr. Doina Bein — August 2022 – May 2023
- Engineered a cyber-threat detection system by implementing web scraping algorithms to gather data from search engine advertisements, followed by robust preprocessing and feature engineering techniques. Utilized advanced machine learning algorithm **Random Forest** to classify **650,000** URLs by attack type, achieving an accuracy of **91.4%**
- Designed and deployed a real-time, machine learning web application for autonomous threat identification, providing instantaneous URL risk assessment. Demonstrated practical application of cybersecurity concepts in **SWE**

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.

TECHNICAL SKILLS

- **Languages**: Python, R, C++, C#, SQL, HTML, Bootstrap CSS, Java, JavaScript, NASM Assembly
- **Developer Tools**: Visual Studio Code, Flask, Scikit-Learn, TensorFlow, Keras, Jupyter Notebook, RStudio, Unity, Xcode, MySQL, FastAPI, WebGL, Deepnote, Overleaf, Android Studio, Wireshark, Cisco Packet Tracer
- **Technologies:** Linux, GitHub, Git, AWS (Lambda, CloudWatch EC2), Node.JS, Databricks, SQLite, Kaggle, Oracle VM

AWARDS/SCHOLARSHIPS

Edwards Lifesciences Scholar | Edwards Lifesciences — December 2024
2023 AWT Scholarship | Advancing Women in Technology — March 2023