BENNETT KAHN

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in [LinkedIn] ⊙ [Github]

RESEARCH & WORK EXPERIENCE

Research Intern
ACS/National Security Agency Future Computing Summer Internship

📅 Jun 2022 - August 2022   📍 Baltimore, MD

- Developed discriminative and generative machine learning (ML) models to classify and generate auxiliary arrays for the *Reverse Ising Problem*
- Built out project-specific ML pipeline functionality for research team
- Generated over 10 million *feasible* auxiliary arrays

Cybersecurity Research Assistant
UNC Charlotte (NSF-funded REU in Computing)

📅 Jun 2021 - May 2022   📍 Metairie, LA

- Coauthored manuscript about the potential use of memory corruption vulnerabilities for hijacking IoT devices; simulated attacks compromising up to 200 IoT devices
- Developed Proof-of-Concept Exploits against vulnerabilities in software stacks used in tens of millions of devices
- Assisted in development of advanced cybersecurity education modules
- Contributed to research proposals for topics, such as software verification and software diversity

Computer Science (Python) Tutor
Juni Learning

📅 Jan 2021 - May 2021   📍 Metairie, LA

- Tutored elementary students and encouraged problem solving and conceptual understanding of core computer science concepts

PROJECTS

Press Release Schedule Manager
Creator/Sole Developer

📅 2021 - current

- Developing Django web app to manage scheduling of a $1 million public relations budget for local law firm
- Using ML to optimize schedule, given 20-30 timing/budget constraints

Undergraduate Honors Thesis
Researcher

📅 August 2022 - current

- Writing joint math/computer science thesis investigating the use of SMT solvers in modeling computer security policies

Club Website Backend Development
Software Developer

📅 June 2022 - August 2022

- Developed account, login, and automatic attendance tracking functionality for the 300+ members of [Cookies & Code]
- Integrated club Drive with website database for seamless updates

Court Watch Nola Data Dashboard
Lead Software Developer

📅 August 2021 - May 2022

- Developed data dashboard for local .org (Court Watch Nola), enabling quick analysis of their roughly 460k existing data entries
- Used Django and HTML/CSS for dashboard; SQL for database

Orleans Parish Court and Police Data Analysis
Co-creator/Data Scientist

📅 August 2021 - December 2021

- Used an AWS VM to scrape 100,000 publicly available court dockets
- Analyzed collected data to discover biases in the Orleans Parish court systems, such as 4-5x higher bonds for Black people, comparatively

3-Man Chess Game
Creator/Sole Developer

📅 June 2020 - September 2020

- Developed all movement and logic rules in a 3-man chess game

EDUCATION

Bachelor's of Science
Mathematics and Computer Science
Tulane University

📅 May 2023
📍 New Orleans, LA
🎓 3.94

SKILLS

Languages

- Python, C, Shell, JavaScript, HTML, CSS, Java, C++, Ruby

Machine Learning

- Experienced with MiniZinc, Scikit-learn, and PyTorch

Data Science

- Skilled in implementing all facets of the data science pipeline, especially with NumPy and Pandas

Exploit Development/Cybersecurity

- Reverse engineering firmware with tools such as Binwalk
- Experience using reverse engineering/binary analysis/debugging tools, namely Radare2, Ropper, and GDB/GEF in x64, ARM64, and MIPS CPU architectures
- Python's pwntools for exploit development

Web Development/Database Management

- Docker, Heroku, Django, and HTML/CSS
- PostgreSQL

ACTIVITIES

- **President:** [Cookies & Code] (*Tulane's computer science club),* Fall 2022 -
- **Vice President:** Cookies & Code, Fall 2021 - Spring 2022
- **Executive Board:** Cookies & Code, Fall 2019 - Spring 2021
- **Vice President:** Math Club, Fall 2021 - Spring 2022
- **Executive Board:** Math Club, Spring 2020 - Spring 2021

ENTREPRENEURSHIP

- Founder of [Picnic Guys NOLA, LLC], a picnic table manufacturing, sales, and distribution company throughout the greater New Orleans region (May 2020 - May 2021)
- [Personal math tutor] for high school students in math and SAT/ACT (May 2019 - June 2020)

HOBBIES/INTERESTS

- **Ninja Warrior Training/Competitor**: member of the National Ninja League; competed in numerous competitions throughout the southeastern United States.
- Skiing, running, and biking