Sofiia Druchyna

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PROFESSIONAL EXPERIENCE

Research Assistant   06/2022 – Present
Tulane/Princeton Universities   *LA/NJ*
- Measuring the Performance and the Power Usage of Newly Developed LLMs.
- Researching Government-as-a-Service and Digital Essentials in a Post-COVID World.
- Researching Blockchain Technology and Diamond Model.
- Designing and Developing the Emergency Mobile Application in Android Studio.
- Developing Emergency Information Notification System that Responds to Imminent Threats.

Assistant Instructor   01/2023 – Present
Tulane/Princeton Universities   *New Orleans, LA/Princeton, NJ*
- Leading Computer Systems Design, Computer Systems and Networking, and Intro to Computer Science II (Java, C, C++, Python) Programming Courses.

Program Analyst Intern   01/2024 – 04/2024
BeyondTrust   *Johns Creek, GA*
- Conducting Quantitative Data Analysis of the Total Application Security Coverage.
- Implementing and Optimizing Static Code Analysis with CodeQL.
- Developing and Integrating Optimized User-Oriented Vulnerability Scanning Solution.

IT Department Assistant   01/2023 – 5/2024
Tulane University   *New Orleans, LA*
- Organizing and Executing Cybersecurity Competition Events.
- Managing Information Technology Departmental Data Center and Operations.

EDUCATION

Princeton University   Princeton, NJ
M.S.E. in Computer Science   *9/2024 – 5/2026*
- Concentration: AI and Education, ML, Probability Theory and Statistics, and Data Science.

Tulane University   New Orleans, LA
B.S. in Computer Science and Cybersecurity   *8/2022 – 5/2024*
- Summa Cum Laude (GPA: 4,00).

PUBLICATIONS AND PROJECTS

"Enhancing Teaching Methods of File Systems" (2023-2024)   [Tulane Archives](#)
"Predictive Models for Cyber Threat Trend Analysis" (2024)   [Data Analytics Project](#)
"Examining the Effect of the 2015 CISA Regarding Online Romance Fraud" (2023)   [MSSA](#)

SKILLS

Languages: Python, Java, JavaScript, C, C++, R, Matlab, Rust, Haskell, Go, Bash, SQL.
Specializations: ML/AI, Data Science and Engineering, Quantitative Research, Probability and Statistics, Causal Inference.
Soft Skills: Leadership, Presentations, Negotiation, Prioritization, Decision-making, Reliability, Adaptability, Growth Mindset, and Emotional Intelligence.

Honors and Awards

- International Tulanian Award for Academic Excellence (2024)
- Center for Engaged Learning and Teaching Undergraduate Research Award (2023-2024)
- Computer Science Teaching Assistantship Excellence Award (2022-2023)
- Scholar Athlete of the Year (2022-2024)
- Dean's List (2021-2024)

Organizations

- Phi Betta Kappa, Chi Alpha Sigma Honor Societies
- Tulane Cyber-Competition Team (2022-2024)
- Student Advisory Board for Tulane School of Professional Advancement (2023)
- Tulane Bowling Team (2022-2024)
- Scholar Athlete of the Year (2022-2024)
- College Scholars (2023)

Academic Courses

- **Computer Science**:
  - Computational Geometry, Computer Architecture, Computer Networks, Algorithms, Artificial Intelligence, Computer Systems and Networking, Data Science, Machine Learning, Computational Biology and Genomics, Theoretical Machine Learning, AI and Education.

- **Mathematics:**
  - Calculus I-III, Discrete Math, Real Analysis I, Linear Algebra, Probability Theory and Stochastic Systems, Statistics, Applied Math.

- **Cybersecurity**:
  - Automation and Bot Development, Certified Ethical Hacker, Cyber Law and Policy, Cyber Threats and Cybersecurity, Digital Forensics and Information Assurance, Forensics Investigation and Response, Fundamentals of Cybersecurity, Hacking for Defense, IP Routing and Switching, IT Infrastructure Fundamentals, Network Security, Penetration Testing, Security +, Database Fundamentals, Technology and Ethics