

EDUCATION

- **University of Maryland, Baltimore County** Baltimore, Maryland
Master of Science in Computer Science; GPA: 4.00 May 2022
- **University of Maryland, Baltimore County** Baltimore, Maryland
Bachelor of Science in Computer Science; GPA: 4.00 Dec. 2020
 - *Summa Cum Laude.*
 - National Science Foundation (NSF) CyberCorps: Scholarship for Service (SFS).

EMPLOYMENT

- **Los Alamos National Laboratory** Virtual
Graduate Research Assistant/Undergraduate Research Assistant Jun. 2020 - Present
 - Conduct research in data analysis and machine learning with an emphasis on tensor decomposition methods.
 - Authored a research paper for a novel solution to anomalous entity detection such as insider threats or users with compromised credentials via non-negative tensor factorization methods.
- **University of Maryland, Baltimore County** Virtual
Graduate Research Assistant/Undergraduate Teaching Fellow Aug. 2020 - Present
 - Conduct research in data analysis and machine learning with an emphasis on tensor decomposition methods.
 - Collaborated with a team to teach and prepare instruction material for an active cyber defense class.
 - Presented Linux hardening and machine learning topics to eighty students.
- **Cyber Pack Ventures** Columbia, MD
Undergraduate Research Assistant Nov. 2019 - May 2020
 - Conducted research on the detection of malicious code in larger systems.
 - Implemented a data science driven approach to malware analysis on a large scale.
- **Montgomery County Government EISO** Rockville, MD
Information Security Intern Jan. 2018 - Oct. 2019
 - Utilized the central threat console, SIEM, asset and vulnerability management system, and help desk system to identify, investigate, and responded to malicious incidents.
 - Developed a real-time cyber threat map, and incident response and vulnerability management dashboards for the Security Operations Center display.

PUBLICATIONS

Conferences & Workshops

- **Eren, M.E.**, Solovyev, N., Hamer, C., McDonald, R., Alexandrov, B., and Nicholas, C.. COVID-19 Multidimensional Kaggle Literature Organization. *In DocEng '21: 21th ACM Symposium on Document Engineering*, Aug. 24–27, 2021, Virtual Event, Limerick, Ireland. ACM, New York, NY, USA, 4 pages. DOI: 10.1145/3469096.3474927
- **Eren, M.E.**, Moore, J.S., and Boian, A.S.. Multi-Dimensional Anomalous Entity Detection via Poisson Tensor Factorization. *In ISI '20: Proceedings of the 13th IEEE International Conference on Intelligence and Security Informatics*, Nov. 9-10, 2020, Virtual Event, USA., 6 pages. DOI: 10.1109/ISI49825.2020.9280524
- **Eren, M.E.**, Solovyev, N., Raff, E., Nicholas, C., and Johnson, B.. COVID-19 Kaggle Literature Organization. *In DocEng '20: 20th ACM Symposium on Document Engineering*, Sep. 29 - Oct. 2, 2020, Virtual Event, CA, USA. ACM, New York, NY, USA, 4 pages. DOI: 10.1145/3395027.3419591

Journals

- Golaszewski, E., Sherman, A.T., [et al, including **Eren, M.E.**]. 2020. Project-based learning continues to inspire cybersecurity students: the 2018–2019 SFS research studies at UMBC. *Association for Computing Machinery*. ACM, New York, NY, USA, 9 pages. DOI: 10.1145/3386363

Posters & Abstracts

- **Eren, M.E.**, Nicholas, C., McDonald, R., and Hamer, C.. Random Forest of Tensors. *MTEM '21: Malware Technical Exchange Meeting*, July 13-15, 2021, Sandia National Laboratories, Virtual Event, USA.
- Boutsikas, J., **Eren, M.E.**, Varga, C., Raff, E., Matuszek, M., and Nicholas, C.. Evading Malware Classifiers via Monte Carlo Mutant Feature Discovery. *MTEM '21: Malware Technical Exchange Meeting*, July 13-15, 2021, Sandia National Laboratories, Virtual Event, USA.

PRESENTATIONS

- Anomalous Event Detection using Non-Negative Poisson Tensor Factorization. *Los Alamos National Laboratory Student Symposium*, Virtual Event, Aug. 10, 2020. (https://youtu.be/_z7yCd4vqrc)

IN THE PRESS

- **Computer scientists build new tool to fight coronavirus:** <https://freethink.com/science/text-mining>. 2020.
- **MC Students Develop App That Can Change Academic Planning:** <https://mcblogs.montgomerycollege.edu/atmc/mc-students-develop-app-that-can-change-academic-planning>. 2018.

SOFTWARE

- **pyCP_APR:** Non-negative Poisson tensor decomposition algorithm on GPU with anomaly detection interface (https://github.com/lanl/pyCP_APR).
- **pyDNMFk:** Distributed non-negative matrix factorization with automatic model determination (<https://github.com/lanl/pyDNMFk>).
- **pyDNTNK:** Distributed non-negative tensor networks (<https://github.com/lanl/pyDNTNK>).
- **pyQBTNs:** Boolean tensor factorization using D-Wave quantum annealers (<https://github.com/lanl/pyQBTNs>).

SKILLS

- **Languages:** Python, C++, C, x86_64 Assembly.
- **ML Technologies:** Jupyter Lab, Spyder, Scikit-learn, PyTorch, Pandas, Numpy, XGBoost, Bokeh, Matplotlib, Folium, Joblib, MongoDB.
- **Other Technologies:** Linux, Ghidra, GDB, Wireshark, Git, Django.
- **Certification:** CompTIA Security+.
- **Foreign Language:** Turkish.

HONORS AND AWARDS

- **R&D100 Winner:** R&D100 winner at R&D Magazine for SmartTensors project (team award), 2021.
- **R&D100 Bronze Award:** R&D100 special recognition award, Market Disruptor - Services category, at R&D Magazine for SmartTensors project (team award), 2021.
- **Employee Achievement Award:** Los Alamos National Laboratory. Spot Award, 2021.
- **Competition Winner:** University of Maryland, College Park, UMD Data Challenge 2020. Awarded the Most Innovative Project, and the Outstanding UMBC Project categories.
- **Honors:** University of Maryland, Baltimore County, Phi Kappa Phi Honors, 2020.
- **Hackathon Winner:** University of Maryland, Baltimore County, hackUMBC 2019. Elected hackathon winning project. Additionally, awarded the Best Data Science Hack, and the Most Unique Hack categories.
- **Hackathon Winner:** Georgetown University, Hoya Hacks 2019. Elected second place in the Best Hardware Hack category.
- **Academic Excellence:** University of Maryland, Baltimore County, President's List, 2019, 2020.
- **Academic Excellence:** University of Maryland, Baltimore County, Dean's List, 2018, 2019, 2020.
- **Scholarship:** National Science Foundation (NSF) CyberCorps: Scholarship for Service (SFS), 2017-2020.
- **Academic Excellence:** Montgomery College, Dr. Harry Harden Jr. Student Academic Excellence Award, 2018.
- **Academic Excellence:** Montgomery College, Frank L. Verwieve Academic Excellence Award, 2017.
- **Honors:** Montgomery College, Phi Theta Kappa Honors, 2016.
- **Academic Excellence:** Montgomery College, Dean's List, 2016, 2017, 2018.