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ResearchGate: researchgate.net/profile/Jeffrey-Young-6

Jeffrey Young

Ph.D. Candidate — Computer Science

Summary

Data scientist and security researcher specializing in AI/ML, predictive analytics, and IoT/voice-assistant security. Experienced in building production ML systems (Python, SQL, R, C#), predictive maintenance, and large-scale data engineering/visualization on Azure and AWS. Peer-reviewed author at USENIX Security and ACM CCS; instructor for systems administration and security.

Education

- 2019–Present **Ph.D. in Computer Science**, *Clemson University*
2017–2019 **M.S. in Computer & Information Science**, *Georgia Southern University*
2013–2017 **B.S. in Computer Science**, *Armstrong State University*

Technical Skills

- Languages Java, Python, R, R Shiny, C, C++, C#, HTML5, JavaScript
ML/DS NumPy, SciPy, Pandas, scikit-learn, PyTorch, TensorFlow, Matplotlib, Plotly
Data MySQL, SQL, Azure Data Lake, AWS; data lakes, relational design
Viz Power BI, Tableau, R Shiny
Tools Linux, GitHub, GitLab, Bootstrap, LeanIX
Interests Voice assistant security, NLP for review analysis, predictive maintenance, image processing, business optimization, Artificial Intelligence, Machine Learning, AI Agents, Entrepreneurial use of AI, Data Science Research Blogging

Experience

- 2022–2025 **TEF 4 Data Scientist**, *Bosch USA*
- Design and deploy data-driven solutions across AI/ML, predictive analytics, and IoT, with emphasis on predictive maintenance and scalable apps in Python, SQL, R, and C#.
 - Build and manage data lakes on Azure; design relational systems; ship dashboards in Power BI and Tableau to drive decisions.
 - Apply image processing, data engineering, and workflow optimization with GitHub and LeanIX.
- 2019–Present **Graduate Research Assistant**, *Clemson University*
- Research IoT device modeling, VA platform security, and automated policy-violation detection using NLP and review analysis.
 - Develop predictive models (RNN, DNN, Markov) and lead a team building a fuzzing tool for voice assistants.
 - Tooling: Python (Scrapy, NumPy, SciPy, Pandas), scikit-learn, PyTorch, TensorFlow, Matplotlib, Plotly.
- 2022 & 2023 **Graduate Teacher of Record**, *Clemson University*
- Instructor for CPSC 4240/6240: System Administration & Security; contemporary OS administration and security.

- 2015–2019 **Research Roles**, *Georgia Southern University & Armstrong State University*
- Principal GRA, Lab Manager, and Research Team Lead across predictive modeling, IoT security, data mining, and algorithm design.
 - Collaborations with DHS/NSA centers on security, crime prediction, and device profiling.

Selected Projects

- 2018 **Mining Savannah Burglary Hot-spots** — SAIOT Lab; delivered to NSA/DHS Center of Academic Excellence.
- 2018 **Canary**: Multi-Agent System for Heat Disorder Prediction in Patrol Teams (IoT feasibility study).
- 2018 **LOCUS**: Teaching tool for locating crime-dense areas, bundled with Hot-spots miner.
- 2017–2019 **IoT Device Profiling for Threat Detection** — Graduate thesis (Georgia Southern).

Selected Publications

Dangerous Skills Got Certified: Measuring the Trustworthiness of Skill Certification in Voice Personal Assistant Platforms. ACM CCS, 2020. *L. Cheng, C. Wilson, S. Liao, J. Young, D. Dong, H. Hu.*

SkillDetective: Automated Policy-Violation Detection of Voice Assistant Applications in the Wild. USENIX Security, 2022. *J. Young, S. Liao, L. Cheng, H. Hu, H. Deng.*

Configurable Anonymous Authentication Schemes for the Internet of Things (IoT). IEEE RFID, 2019. *A. Rasheed, R. R. Hashemi, A. Bagabas, J. Young, C. Badri, K. Patel.*

An RNN Model for Exploring the Macroeconomic and Financial Indicators in the Context of the COVID-19 Pandemic. ICCS, 2022. *R. R. Hashemi, O. M. Ardakani, J. A. Young, A. G. Bahrami.*

Extraction of the Essential Constituents of the S&P 500 Index. CSCI, 2017. *R. R. Hashemi, O. M. Ardakani, A. A. Bahrami, J. A. Young.*

A Mediated Multi-RNN Hybrid System for Prediction of Stock Prices. CSCI, 2020. *R. R. Hashemi, O. M. Ardakani, A. A. Bahrami, J. A. Young.*

A Mining Driven Decision Support System for Joining the European Monetary Union. IMMM, 2018. *R. R. Hashemi, O. Ardakani, A. Bahrami, J. Young, R. Campbell.*

Vaccine: A Block Cipher Method for Masking and Unmasking of Ciphertexts' Features. CYBER, 2017. *R. R. Hashemi, A. Rasheed, A. Bahrami, J. Young.*

Mining the Impact of Social Media on High-Frequency Financial Data. ICCS/CSCI, 2021. *R. R. Hashemi, O. M. Ardakani, J. A. Young, C. Tamrakar.*

Discovery of Burglary Hotspots and Extraction of Their Features. CSCI, 2020. *A. Little, R. R. Hashemi, J. A. Young.*

A Methodological Framework for Validating ZKP Authentication Process. IEEE HONET, 2020. *J. A. Young, A. Rasheed, R. R. Hashemi, A. Bagabas.*

IoT Security Through Device Profiling. 2019. *J. A. Young.*

Effects of Phenotypical Patterns on Epigenetic Markers. CSCI, 2018. *R. R. Hashemi, A. A. Bahrami, J. A. Young, A. Schrey, T. Robbins, A. Ragsdale,*

10 RNN Models for Evaluating Financial Indices: Examining Volatility and Demand-Supply Shifts During COVID-19. In *Big Data, Data Mining and Data Science: Algorithms, Infrastructures & Tools*, 2024. *R. R. Hashemi, O. M. Ardakani, J. Young, A. G. Bahrami.*

A Block Cipher Masking Technique for Single and Multi-Paired-User Environments. *International Journal on Advances in Security* 11(1–2), 2018. R. R. Hashemi, A. Rasheed, J. Young, A. A. Bahrami.

Mining Diatom Algae Fossil Data for Discovering Past Lake Salinity. *IADIS Int. J. on Computer Science & Information Systems* 12(2), 2017. R. R. Hashemi, A. A. Bahrami, J. A. Young, N. R. Tyler, J. Y. S. Hodgson.

An Ecological-Based Genetic Investigation Using Association Analysis. BIOCAMP, 2016. R. R. Hashemi, A. Bahrami, J. A. Young, A. W. Schrey.

Extraction of Historical Water Salinity from Diatom Algae Fossils: A Data Mining Approach. AC, 2016. R. R. Hashemi, A. A. Bahrami, J. A. Young, N. R. Tyler, J. Hodgson.

A Grid Based Analysis Approach for Learning From Sparse Data. 2003. R. R. Hashemi, M. Bahar, N. Tang, J. Young.

Privacy Preserved Authentication: A Neural Network Approach. 2019. R. R. Hashemi, A. Rasheed, J. Young, A. A. Bahrami.

Service

Reviewer IEEE GLOBECOM (2019), ICCN (2019, sub-reviewer), IEEE ESSCA (2021), ACSAC (2021, 2022), IEEE IPCCC (2021), IEEE INFOCOM (2021), USENIX Security '22 (AEC, Spring & Fall).

Honors & Awards

2019, 2022 Telford Family Annual Fellowship in Computing, Clemson University
2018 Bhatia Foundation Scholarship in Computer Science, Georgia Southern
2013 Dixie Crystal Scholarship, Armstrong State University

Societies

2015 - Current Upsilon Pi Epsilon, international honor society for the computing and information disciplines
2021, Current The Honor Society of Phi Kappa Phi
2019, Current IEEE
2019, Current IEEE Young Professionals
2019, Current IEEE Computer Society
2019, Current IEEE Power and Energy Society
2019, Current IEEE Council on RFID

Languages

English Native