

Thanh Bui

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 [Thanh Bui](#) |  [tbui](#) |

Fayetteville, AR - 72703, USA

OBJECTIVE

Data Scientist and Applied Researcher with skills in Python, ML pipelines, and statistical modeling expertise. Skilled in building scalable, automated data systems and deploying ML solutions into real-time environments. Focused on enabling AI-driven decision-making by combining robust engineering with domain-specific insights, particularly in fast-paced research-driven teams.



EXPERIENCE

- University of Arkansas - Division of Agriculture** Mar. 2021 - Present
Research Technicians Fayetteville, AR
 - Developed an algorithm to detect Nitrogen deficiency for the corn crop based on AUS imagery
 - Implemented a working prototype with the developed algorithm
 - Optimized the prototype and built a package from the developed algorithm
 - Presented findings at AI-Driven Innovations in Agriculture in Auburn, AL
- University of Arkansas** Aug. 2020 - Present
Graduate Research Fayetteville, AR
 - Developed various embedding methods to capture the contextual meaning of each attribute for system access requests
 - Built various Machine Learning models to generate valid system access authorization for each user based on their attributes
 - Evaluated new access control methods against other studied methods using real-life and simulated datasets
 - Developed an advanced method to handle new users' attributes using information from known tokens
- Texas Tech University** Oct. 2019 - July 2020
Data Analyst Lubbock, TX
 - Performed data cleaning on collected data for the Study Abroad program
 - Analyzed students' behavioral patterns based on their various backgrounds
 - Constructed the statistical analysis section of the Journal submitted to Study Abroad Research in Second Language Acquisition and International Education

EDUCATION

- University of Arkansas** Aug, 2025
Ph.D. in Computer Science Fayetteville, AR
 - Dissertation Title: Contextual Embedding using Machine Learning for Cybersecurity: Access Control and Application
- University of Arkansas** May 2018
Master in Statistics and Analytic Fayetteville, AR
- University of Arkansas** May 2016
Bachelor and Master in Industrial Engineering Fayetteville, AR

PROJECTS

- Value Embedding Approach for Access Control** 
Tools: [Python, NLP, Machine Learning]
 - Developed an unsupervised method of capturing and embedding users' attributes for accessing resources using skip-gram structure models
 - Built a supervised authorization model using a Gradient Boosting Tree using a High-Performance Computing system
 - Composed the result into a research paper for publication
- Nitrogen Deficiency from AUS imagery** 
Tools: [Python, Computer Vision, Machine Learning]
 - Developed an algorithm to detect the Nitrogen deficiency based on the greenness entropy of corn crop sections
 - Built a back-end prototype API using the developed Nitrogen deficiency detection algorithm
 - Optimized the prototype to generate solutions with a close real-time operation

PUBLICATIONS

- [J.1] Thanh Bui, Brajendra Panda (2025). **Word-embedding Approach for Unknown Attributes in Access Control Model**. In *Research Square*, Preprint. May 2025.
- [J.2] Thanh Bui et al.(2024). **Word-embedding Approach for Unknown Attributes in Access Control Model**. In *Research Square*, Preprint. May 2025.
- [C.1] Thanh Bui, Brajendra Panda (2024). **Emotional Health and Climate-Change-Related Stressor Extraction from Social Media: A Case Study Using Hurricane Harvey**. In *World Congress in Computer Science, Computer Engineering & Applied Computing*, Mathematics. 2023; 11(24):4910
- [C.2] Thanh Bui, Brajendra Panda (2024). **A Multi-Model Rouge Nodes Detection System for Fog Computing**. In *World Congress in Computer Science, Computer Engineering & Applied Computing*, p.2427-2434. IEEE, 24 July 2023
- [J.3] Raychel Vasseur, Thanh Bui, Paul W. Paré. (2022). **Evaluating pretravel study-abroad instruction utilizing curricular intervention and customized assessment** . *Journal Name*, Vol. 7, Issue 2, pp. 273-299. DOI: <https://doi.org/10.1075/sar.21008.vas>

SKILLS

- **Programming Languages:** Python, R, VBA, C++
- **Database Systems:** MySQL, Microsoft SQL Server
- **Data Science & Machine Learning:** Data Engineering Collaboration, Scalable ML Solutions, Software Engineering Integration
- **Research Skills:** Artificial Intelligence (AI), Machine Learning (ML), Generative AI (Gen AI), Large Language Models (LLMs), AI-Driven Automation