Hieu T. Pham

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Curriculum Vitae
February 4, 2026

Academic Experience

Assistant Professor of Management Science **2021 – Present**
University of Alabama in Huntsville *College of Business*
Information Systems, Supply Chain, and Analytics

Graduate Research/Teaching Assistant **2016 – 2018**
Iowa State University
Industrial and Manufacturing Systems Engineering

Graduate Teaching Assistant **2014 – 2016**
Kansas State University
Mathematics

Industry Experience

Machine Learning Engineer **2020 – 2021**
Syngenta Group

Research Data Scientist **2018 – 2020**
Syngenta Group

Data Scientist **2017 – 2018**
Omni Analytics Group

Education

Ph.D. Industrial Engineering - Operations Research and Analytics
Iowa State University *2018*

M.S. Mathematics
Kansas State University *2015*

B.S. Mathematics
Tennessee Technological University *2014*

Publications

Published

1. Pham, H., Arwade, G., Tan, Y., Bhatt, P., & Pavlopoulos, V. (2026). Training data optimization for classification via weighted dimensional reduction and adaptive stratified clustering for balanced and imbalanced data. *Journal of Classification*. Forthcoming.
2. Tan, Y., Orman, W., Pavlopoulos, V., Pham, H., & Patnayakuni, R. (2026). A dynamic decision support system for real-time student risk identification via Bayesian networks. *International Journal of Knowledge Management*, 22(1), 1-27. (ABDC Rank: B).

3. Pham, H., Pavlopoulos, V., Patnayakuni, R., Verderbar, S., & Bliss, K. (2025). The hidden keywords: An algorithmic approach to uncovering the value of negative keywords in search advertising. *Decision Sciences*. (ABDC Rank: A*).
4. Bhatt, P., Singh, T. Pavlopoulos, V., & Pham, H. (2025). Decoding Sentiments, Unveiling AI-Generated Content Through Sentiment Analysis and Human Evaluation. *Journal of Global Information Management*, 33(1), 1-32. (ABDC Rank: A).
5. Tettey, A., Pham, H., Chen, H., Dongsheng, W., & Wooley, A. (2025). A decision support framework for electric demand planning in distribution systems during extreme minimum temperatures. *Energy Reports*, 14, 1137-1148.
6. Pham, H., Bhatt, P., Pavlopoulos, V., Tan, Y., & Patnayakuni, R. (2025). A comparative study of convolutional neural networks and vision transformers for agricultural image classification. *Journal of Database Management*, 36(1), 1-27. (ABDC Rank: A).
7. Wallach, K., Pham, H., Koschmann, A., & Arwade, G. (2025). Analyzing the impact of faces on consumer engagement in branded social media videos: A machine learning approach. *Journal of Consumer Marketing*, 42(3), 318-335. (ABDC Rank: A).
8. Wood, K., Pyun, C., & Pham, H. (2025). Beyond green labels: Assessing mutual funds' ESG commitments through large language models. *Finance Research Letters*, 106713 (ABDC Rank: A).
9. Pham, H., Tan, Y., Singh, T., Pavlopoulos, V., & Patnayakuni, R. (2024). A multi-head attention-like feature selection approach for tabular data. *Knowledge-Based Systems*, 112250. (ABDC Rank: A).
10. Khaki, S., Safaei, N., Pham, H., & Wang, L. (2022). Wheatnet: A lightweight convolutional neural network for high-throughput image-based wheat head detection and counting. *Neurocomputing*, 489, 78–89.
11. Moeinizade, S., Pham, H., Han, Y., Dobbels, A., & Hu, G. (2022). An applied deep learning approach for estimating soybean relative maturity from UAV imagery to aid plant breeding decisions. *Machine Learning with Applications*, 7, 100233.
12. Pham, H., Reisner, J., Swift, A., Olafsson, S., & Vardeman, S. (2022). Crop phenotype prediction using biclustering to explain genotype-by-environment interactions. *Frontiers in Plant Science*, 13.
13. Mosley, L., Pham, H., Guo, X., Bansal, Y., Hare, E., & Antony, N. (2022). Towards a systematic understanding of blockchain governance in proposal voting: A dash case study. *Blockchain: Research and Applications*, 100085.
14. Khaki, S., Pham, H., Khalilzadeh, Z., Masoud, Z., Safaei, N., Han, Y., Kent, W., & Wang, L. (2022). High-throughput image-based plant stand count estimation using convolutional neural networks. *PLOS One*, 17(7), e0268762.
15. Shahhosseini, M., Hu, G., & Pham, H. (2022). Optimizing ensemble weights and hyperparameters of machine learning models for regression problems. *Machine Learning with Applications*, 100251.
16. Khaki, S., Pham, H., & Wang, L. (2021). Simultaneous corn and soybean yield prediction from remote sensing data using deep transfer learning. *Scientific Reports*, 11(1), 1–14.
17. Han, Y., Cameron, J., Wang, L., Pham, H., & Beavis, W. (2021). Dynamic programming for resource allocation in multi-allelic trait introgression. *Frontiers in Plant Science*, 12, 1181.
18. Khaki, S., Pham, H., Han, Y., Kuhl, A., Kent, W., & Wang, L. (2021). DeepCorn: A semi-supervised deep learning method for high-throughput image-based corn kernel counting and yield estimation. *Knowledge-Based Systems*, 106874. (ABDC Rank: A).
19. Moeinizade, S., Han, Y., Pham, H., Hu, G., & Wang, L. (2021). A look-ahead Monte Carlo simulation method for improving parental selection in trait introgression. *Scientific Reports*, 11, 3918.
20. Pham, H., & Olafsson, S. (2020). On Cesàro averages for weighted trees in the random forest. *Journal of Classification*, 37, 223–236.

21. Li, J., Reisner, J., Pham, H., Olafsson, S., & Vardeman, S. (2020). Biclustering with missing data. *Information Sciences*, 510, 304–316.
22. Khaki, S., Pham, H., Han, Y., Kuhl, A., Kent, W., & Wang, L. (2020). Convolutional neural networks for image-based corn kernel detection and counting. *Sensors*, 20, 2721.
23. Pham, H., & Olafsson, S. (2019). Bagged ensembles with tunable parameters. *Computational Intelligence*, 35, 184–203.
24. Reisner, J., Pham, H., Olafsson, S., & Vardeman, S. (2019). biclustermd: An R package for biclustering with missing values. *The R Journal*, 11(2), 69–84.

Revise and Resubmit

- Pavlopoulos, P., Killick, R., Can, E., Pham, H., & Bhatt, R. Forecasting seasonal changepoint models utilizing changepoint uncertainties. Manuscript submitted for publication in *International Journal of Forecasting*. (ABDC Rank: A).
- Shen, W., Lee, C., & Pham, H. Breaking the bank – exploring the quality and perceptual bias of AI-generated vs. publisher test bank questions in accounting education. Manuscript submitted for publication in *Issues in Accounting Education*. (ABDC Rank: A).

Submitted

- Can, E., Lyu, K., Pham, H., & Yang, J. The Effect of the Kansas tax reform on self-employment hours worked. Manuscript submitted for publication in *International Tax and Public Finance*.
- Bhatt, P., Akanfe, O., Thompson, S., & Pham, H. Human-induced cyber risks in AI systems in organizations: A taxonomy of AI-human interactions cyber threats. Manuscript submitted for publication in *International Journal of Information Management*.

In Preparation

- Pham, H. & Guo, X., A dynamic framework for few-shot knowledge graph reasoning using LLM-guided reinforcement learning.
- Tettey, A., Pham, H., & Wooley, A. Enhancing Power System Resilience to Extreme Temperatures through Proactive Demand Planning: A Systematic Review.

Peer-reviewed Conference Proceedings and Presentations

- Pavlopoulos, V., Killick, R., Can, E., Pham, H., & Bhatt, P. (2025). *Forecasting Seasonal Changepoint Models Utilizing Changepoint Uncertainties*, INFORMS Annual Meeting, Atlanta, GA.
- Tan, Y., Lu, Y., Wang, L., & Pham, H. (2025). *Flight Delay Dynamics: Unraveling the Impact of Airport-Network-Spilled Propagation on Airline on-time Performance*, INFORMS Annual Meeting, Atlanta, GA.
- Schrimpsher, V. A., Pham, H., Wooley, A., Gholston, S., & Tettey, A. (2025). *Tracking the unseen: autonomous multi-object motion analysis in complex environments*, North American Conference on Industrial Engineering and Operations Management-Computer Science Tracks (pp. 99-113). Cham: Springer Nature Switzerland.
- Schrimpsher, V. A., Pham, H., Wooley, A., Gholston, S., & Tettey, A. (2025). *Bridging the black box: data mining enhanced machine learning interpretability for exoplanet discovery*, North American Conference on Industrial Engineering and Operations Management-Computer Science Tracks (pp. 255-270). Cham: Springer Nature Switzerland.
- Pham, H. (2025). *An algorithmic approach to uncovering the value of negative keywords in search advertising*, Iowa State University IMSE Graduate Student Seminar, Ames, Iowa.
- Gholston, S., Loyd, N., Pham, H., & St. John, C. (2024). *Review of the new Baldrige organizational*

assessment process, American Society for Engineering Management, Virginia Beach, VA.

- Schrimpsher, V., Pham, H., Gholston, S., Wooley, A., & Tettey, A. (2024). *A review of research on supply chain antifragility: Unveiling enablers for resilience enhancement*, American Society for Engineering Management, Virginia Beach, VA.
- Hudson, M., Pham, H., Tan, Y., & Wooley, A. (2024). *Large language models to improve defense acquisition*, INFORMS Annual Meeting, Seattle, WA.
- Pham, H., Pavlopoulos, V., & Patnayakuni, R. (2024). *Reducing search advertisement spending through a two-stage term embedding and optimization approach*, INFORMS Annual Meeting, Seattle, WA.
- Patnayakuni, R., Pham, H., & Shen, M. (2024). *From content to quiz: Using AI to simplify assessment question development*, TRED Talk, SAP Academic Community Conference North America and ERPsim User Group Meeting, Montreal, Canada.
- Mwanza, C., & Pham, H. (2024). *Graph neural networks for Ethereum fraud detection*, IISE Annual Conference and Expo, Montreal, Canada.
- Pham, H., Taufeeq, M., Gholston, S., & Mahalingam, S. (2024). *Using machine learning to analyze hospital admissions*, IISE Annual Conference and Expo, Montreal, Canada.
- Pham, H. (2023). *A biclustering approach to phenotype prediction*, INFORMS Annual Meeting, Phoenix, AZ.
- Wright, N., Gholston, S., Pham, H., & Menon, V. (2023). *Analysis on the effectiveness and impact of the Baldrige Performance Excellence Program on high-performing organizations*, American Society for Engineering Management, Denver, CO.
- Wallach, K., Pham, H., Koschmann, A., & Arwade, G. (2023). *Face size and user engagement in social media videos: A machine learning approach*, American Marketing Association Conference, Nashville, TN.
- Mosley, L., Pham, H., Bansal, Y., Hare, E., & Mwanza, C. (2023). *Image-based sorghum head counting when you only look once*, Proceedings of the 56th Hawaii International Conference on System Sciences, Maui, HI.
- Pham, H. (2022). *Towards a systematic understanding of blockchain governance in proposal voting: A dash case study*, INFORMS Annual Meeting, Indianapolis, IN.
- Moeinizade, S., Han, Y., Pham, H., Hu, G., & Wang, L. (2020). *A look-ahead Monte Carlo simulation method for improving parental selection in trait introgression*, INFORMS Annual Virtual Meeting.
- Khaki, S., Pham, H., Han, Y., Kuhl, A., Kent, W., & Wang, L. (2020). *Convolutional neural networks for image-based corn kernel detection and counting*, 2020 CVPR: The 1st International Workshop and Prize Challenge on Agriculture-Vision: Challenges & Opportunities for Computer Vision in Agriculture.
- Almeda-Basora, E., & Pham, H. (2019). *A sequentially updating Bayesian network that bests the oddsmakers by predicting the total number of points scored in NBA games*, Midwest Sports Analytics Meeting, Pella, IA.
- Pham, H. (2019). *Genetics by environment interaction*, INFORMS Student Chapter at Iowa State University, Ames, IA.
- Han, Y., & Pham, H. (2019). *Data analytics in agricultural business*, 2nd Midwest Statistical Machine Learning Colloquium, Ames, IA.
- Pham, H. (2019). *Biclustering to explain genotype-by-environment interactions*, Syngenta Data Science Community of Practice, Raleigh, NC.
- Pham, H. (2019). *The digital future of agriculture*, INFORMS Annual Meeting, Seattle, WA.
- Amini, F., Shahhosseini, M., Hu, G., & Pham, H. (2019). *Improving prediction accuracy of regression problems with optimization-based ensemble learning and a two-layer feature selection method*, 2019 Midwest Big Data Hub All-Hands Meeting, Chicago, IL.

- Mosley, L., Pham, H., Bansal, Y., & Hare, E. (2019). *Sorghum head image analysis when you only want to look once*, Proceedings of the Second International Workshop on Machine Learning for Cyber-Agricultural Systems.
- Shahhosseini, M., Hu, G., & Pham, H. (2019). *Optimizing ensemble weights for machine learning models: A case study for housing price prediction*, Proceedings of the 2019 INFORMS Conference on Service Science.
- Pham, H. (2018). *Data analytics in agricultural business*, INFORMS Annual Meeting, Phoenix, AZ.
- Pham, H. (2018). *Biclustering for sparse data*, Iowa State University IMSE Graduate Seminar, Ames, IA.
- Reisner, J., & Pham, H. (2018). *Biclustering for sparse data*, 1st Midwest Statistical Machine Learning Colloquium, Ames, IA.

Funding

- College of Business Summer 2024 Course Innovation Grant, *University of Alabama in Huntsville*, 05/2024 - 08/2024, PI., $6,250
- College of Business Summer 2024 Research Grant, *University of Alabama in Huntsville*, 05/2024 - 08/2024, PI., $13,930
- Data Lifecyle and Model Governance, *Franklin Creative Solutions*, 09/2022 - 12/2022, PI., $10,000
- College of Business Summer 2022 Course Innovation Grant, *University of Alabama in Huntsville*, 05/2022 - 08/2022, PI., $6,250
- New Faculty Research Grant, *University of Alabama in Huntsville*, 04/2022 - 05/2023, PI., $10,000

Teaching

The University of Alabama in Huntsville	**Evaluations**
HON 301: Seminar on Cryptocurrencies	*Fall '22: 4.83/5.0 (n=7)*
HON 301: Seminar on Sports Analytics	*Fall '23: 4.82/5.0 (n=10)*
HON 301: Seminar on Anime Debates	*Fall '25: 4.67/5.0 (n=4)*
IS 210: Intro to Computer Programming in Business	
IS 301: Information Systems in Organizations	
IS 471/571: Business Analytics and AI	*Sp '23: 4.97/5.0 (n=27) | Fall '23: 4.92/5.0 (n=15)*
IS 480/580: Intro to Analytics with AWS	*Fall '24: 4.67/5.0 (n=3) | Sp '25 4.68/5.0 (n=18) Fall '25: 4.62/5.0 (n=18)*
MSC 385: Operations Analysis	*Fall '23: 4.92 (n=13) | Sp '24: 4.70 (n=55) Sum '24: 4.80 (n=22) | Sp '25: 4.67 (n=26) Fall '25: 4.67 (n=16)*
MSC 550: Intro Analytics and Programming	*Fall '21: 4.89 (n=11) | Sp '22: 4.75 (n=13)*
MSC 615: Decision Modeling	*Fall '21: 4.76 (n=12) | Sp '22: 4.93 (n=15) Fall '22: 4.88 (n=24) | Fall '24: 4.22 (n=5)*
MSC 650: Special Topics - Deep Learning	*Fall '22: 4.81/5.0 (n=6)*
MSC 692: Business Analytics Practicum	*Sp '22: 4.45 (n=12) | Sp '23 4.97 (n=29) Sp '24 4.94 (n=15) | Sp '25 4.88 (n=13)*

Iowa State University

- IE 361: Statistical Quality Assurance
- IE 590: Special Topics - Analytics Projects for Improved Decision Making in the Financial Sector
- IE 590: Special Topics - Analytics Projects for Improved Decision Making in the Agricultural Sector

Kansas State University

- Math 100: College Algebra
- Math 240: Elementary Differential Equations

Honors and Awards

- **2024**: Outstanding Undergraduate Faculty Teaching Award, UAH College of Business
- **2024**: Outstanding Graduate Faculty Teaching Award, UAH College of Business
- **2019**: 1st Place in Image-Based Sorghum Head Object Detection and Counting Machine Learning Competition, Second International Workshop on Machine Learning for Cyber-Agricultural Systems
- **2018**: Graduate Student Research Excellence Award, Iowa State University
- **2018**: Best Poster - *Biclustering for Sparse Data*, 1st Midwest Statistical Machine Learning Colloquium
- **2018**: Most Popular Poster - *Biclustering for Sparse Data*, 6th Annual IMSE Research Symposium
- **2017**: Graduate Student Teaching Excellence Award, Iowa State University
- **2017**: Most Popular Poster - *Understanding why NBA Teams with Superior Talent Lose in the Playoffs*, 5th Annual IMSE Research Symposium
- **2014 – 2016**: Timothy R. Donoghue Graduate Scholarship, Kansas State University

Mentoring

The University of Alabama in Huntsville

- **2022 – 2023**: Charity Mwanza, Masters of Science in Business Analytics
  Thesis Advisor
- **2023 – Present**: Maurice Hudson, Doctor of Philosophy in Systems Engineering
  Thesis Advisor
- **2024 – Present**: Anyama Tettey, Doctor of Philosophy in Industrial Engineering
  Thesis Advisor
- **2024 – Present**: Veronica Schrimpsher, Doctor of Philosophy in Engineering Management
  Thesis Advisor

Institutional Service

- **2025**: Member, UAH Honors Council, UAH Honors College
- **2025**: Member, College of Business Dean Review Committee, UAH
- **2025**: Member, Eminent Scholar in Management of Technology Search Committee, Information Systems, Supply Chain and Analytics, UAH College of Business
- **2025**: Faculty Advisor, Sand Volleyball Club, UAH
- **2024–2026**: Member, Curriculum Committee, UAH College of Business
- **2024**: Member, Lecturer Search Committee, Industrial and Systems Engineering and Engineering Management, UAH College of Engineering
- **2023**: Member, Faculty Development Committee, UAH College of Business

- **2022**: Member, Tenure Track Management Science Search Committee, UAH College of Business
- **2021**: Member, Department Chair Search Committee, Information Systems, Supply Chain and Analytics, UAH College of Business

Professional Service

- **2025**: Co-Chair, 2025 INFORMS Data Mining Society's Data Challenge
- **2024**: Co-Chair, 2024 INFORMS Data Mining Society's Data Challenge
- **2023**: Co-Chair, 2023 INFORMS Data Mining Society's Data Challenge
- **2023**: Session Chair, 2023 INFORMS Annual Meeting
- **2022**: Session Chair, 2022 INFORMS Annual Meeting
- **2019**: Organizing Committee Member, 2nd Midwest Statistical Machine Learning Colloquium
- **Invited Manuscript Reviewer**: *Agriculture*; *Agronomy*; *Applied Soft Computing*; *Artificial Intelligence Review*; *Blockchain: Research and Applications*; *Cluster Computing*; *Computers, Materials and Continua*; *Discover Artificial Intelligence*; *Discover Applied Sciences*; *Distributed Ledger Technologies*; *Expert Systems with Applications*; *Frontiers in Plant Science*; *IEEE Systems*; *International Journal of Information Security and Privacy*; *International Journal of Machine Learning and Cybernetics*; *Knowledge-Based Systems*; *Knowledge and Information Systems*; *Machine Learning with Applications*; *Mathematics*; *Micromachines*; *Pattern Recognition*; *Pattern Recognition Letters*; *Plant Phenomics*; *PLOS One*; *Sensors*; *Statistics and Computing*; *Statistics in Medicine*; *The Journal of Supercomputing*

Professional Societies

- **2018 – Present**: INFORMS, Membership

Open-Source R Packages

- **biclustermd**: Access Link
- **decp**: Access Link
- **uniswappeR**: Access Link