

Kun Bu

Assistant Professor, Pepperdine University

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Education

University of South Florida	Ph.D.	Statistics	Magna Cum Laude	2024
University of South Florida	M.A.	Statistics	Cum Laude	2020
University of Tampa	M.S.	Finance	Cum Laude	2017
East Tennessee State University	B.A.	Human Resource Management	Cum Laude	2015

Appointments

Pepperdine University	Assistant Professor	2026–present
University of South Florida	Postdoctoral Scholar	2024–2026
University of South Florida	Graduate Teaching Assistant	2023–2024
University of South Florida	Graduate Research Assistant	2021–2023

Teaching

Pepperdine University

Fall 2026	CS 111: Programming Principles II
	DS 210: Introduction to Machine Learning

University of South Florida

Spring 2026	STA 5166: Statistical Methods I
Fall 2025	STA 3024: Introductory Statistics II
	STA 4102: Computational Methods for Applied Statistics
Spring 2025	STA 3024: Introductory Statistics II
	STA 4504: Categorical Data Analysis
Fall 2024	STA 3024: Introductory Statistics II
Spring 2024	STA 4442: Introduction to Probability
	STA 2023: Introduction to Statistics I
Fall 2023	STA 4322: Introduction to Mathematical Statistics
	STA 2023: Introduction to Statistics I

Publications

1. *Financial NeQTL: A Genomics-Inspired Bayesian Approach to Market Structure Inference*, **Bu, K.** and Kim, J., manuscript completed, under review, 2026.

2. *Cardiovascular Risks of COVID-19 Therapeutics: Integrated Analysis of FAERS, Electronic Health Records, and Transcriptomics*, Zhu, X., Kuppa, S. A., Umeukeje, G., Morris, R., Bui, L., **Bu, K.**, Zhang, J., Wei, J. and Cheng, F., Pharmaceuticals, 2026
3. *Integration of Image Segmentation with Classical L_2 Optimization Theories of Statistics*, Kim, J., Jang, J. and **Bu, K.**, JSM Proceedings, 2025.
4. *The Association Between Dexmedetomidine and Bradycardia*, Morris, R., Kuppa, S., Zhu, X., **Bu, K.**, Han, W. and Cheng, F., *Genes*, 2025.
5. *The Association Between Statin Drugs and Rhabdomyolysis*, Morris, R., **Bu, K.**, Han, W., Wood, S., Velez, P., Ward, J., Crescitelli, A. and Martin, M., *Genes*, 2025.
6. *Advancing Text Summarization and Classification: Deep Insights from Transformer-based Statistical Learning*, **Bu, K.**, University of South Florida, 2024.
7. *Analysis of Literature-Derived Duplicate Records in the FDA Adverse Event Reporting System database*, Han, W.*, Morris, R.*, **Bu, K.***, Zhu, T., Huang, H. and Cheng, F., *Canadian Journal of Physiology and Pharmacology*, 2024.
8. *Comparing the risk of deep vein thrombosis of two combined oral contraceptives*, Stalas, J.*, Morris, R.*, **Bu, K.***, et al., *Heliyon*, 2024.
9. *Comparative Analysis of Sentiment in Original and Summarized Tweets*, **Bu, K.** and Kandethody, R., AIBD, 2024.
10. *Exploring Drug-drug Interaction Information from PubMed using Association Rules*, **Bu, K.***, Han, W.*, Morris, R.* and Cheng, F., *Chemistry & Biodiversity*, 2023.
11. *Deception Detection using Random Forest-based Ensemble Learning*, **Bu, K.** and Kandethody, R., ICSTA, 2023.
12. *Dysphagia Risk in Patients Prescribed Rivastigmine*, **Bu, K.***, Patel, D.*, Morris, R.*, Han, W., Umeukeje, G., Zhu, T. and Cheng, F., *Journal of Alzheimer's Disease*, 2022.
13. *The Association Between Use of Rivastigmine and Pneumonia*, Morris, R.*, Umeukeje, G.*, **Bu, K.*** and Cheng, F., *Journal of Alzheimer's Disease*, 2021.
14. *Bradycardia due to Donepezil in Adults*, Morris, R., Luboff, H., Jose, R. P., Eckhoff, K., **Bu, K.**, et al., *Journal of Alzheimer's Disease*, 2021.
15. *Bayesian Reliability Analysis for Optical Media Using Accelerated Degradation Test Data*, **Bu, K.**, University of South Florida, 2020.

Presentations

- ◇ **2024.** MRI Image Segmentation: Methods and Evaluation. *USF Postdoc Lightning Talks*.
- ◇ **2024.** Deception Detection using Random Forest-based Ensemble Learning. *Annual Conference on the Frontiers of Statistics*.

- ◇ **2024.** Comparative Analysis of Sentiment in Original and Summarized Tweets: Leveraging Transformer Models for Enhanced NLP Insights. *Joint Meetings of the Florida Section of the Mathematical Association of America.*
 - ◇ **2024.** Comparative Analysis of Sentiment in Original and Summarized Tweets: Leveraging Transformer Models for Enhanced NLP Insights. *International Conference on Artificial Intelligence and Big Data.*
 - ◇ **2023.** Deception Detection using Random Forest-based Ensemble Learning. *International Conference on Statistics: Theory and Applications.*
 - ◇ **2023.** Exploring Drug-drug Interaction Information from PubMed using Association Rules. *International Conference on Intelligent Biology and Medicine.*
 - ◇ **2022.** Lie Detection using Machine Learning Algorithms, OpenCV and Dlib in Python. *ASA Annual Florida Chapter Meeting.*
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Technical Skills

- ◇ **Programming Languages:** Python, R, RCpp, RStan, SQL, C++, SAS.
 - ◇ **Developer Tools:** Git, IDEs, Database Management Systems, Web Scraping, APIs, Unix Shell, Data Warehousing and ETL, PostgreSQL.
 - ◇ **Frameworks:** Machine Learning, Data Science, Statistical Modeling, Bayesian Inference, Reinforcement Learning, Natural Language Processing, Data Structures, Dynamic Programming.
 - ◇ **Cloud/Databases:** IBM Db2, SQL Magic, SQLite.
 - ◇ **Soft Skills:** Multi-tasking, storytelling communication, perseverance, passion, result-oriented work, teamwork, leadership.
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Research Interests

- ◇ Statistical Reinforcement Learning
 - ◇ Machine Learning
 - ◇ Natural Language Processing
 - ◇ Biostatistics
 - ◇ Bayesian Data Analysis
 - ◇ Data Science
 - ◇ Computational Statistics
 - ◇ Pharmaceutical Data Mining
 - ◇ Drug-Drug Interaction Analysis
 - ◇ Financial Modeling
 - ◇ Mathematical Finance
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Grants and Awards

- ◇ Innovative Research Award, 35th Edition of the International Research Awards on Cardiology and Cardiovascular Medicine, Scifax, 2026.
 - ◇ SEED Grant Proposal Contributor, Drexel University Team: Contributed expertise in statistics, AI integration, evaluation design, and performance measures for the FY 2026 Supporting Effective Educator Development grant proposal, \$3.0 million for 36 months, 2026.(Under Review)
 - ◇ Editor's Choice Recognition: Paper on literature-derived duplicate records in the FDA Adverse Event Reporting System (FAERS) database selected as Editor's Choice for the February issue of Canadian Journal of Physiology and Pharmacology, 2025.
 - ◇ Tharp Endowed Award from the College of Arts and Sciences: Recognized for Excellence in Teaching and Research, \$1,293.75, 2024.
 - ◇ IBM Data Science Professional Certificate, 2024.
 - ◇ International Teaching Assistant Language Assessment Certification, 2023.
 - ◇ USF Sarasota-Manatee Campus Summer Grant Writing Workshops Program, 2021.
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Achievements

- ◇ **Software Development:** Author and maintainer of the R package PubMedDDI. GitHub Repository, 2025.
- ◇ **Copyright:** Advancing Text Summarization and Classification: Deep Insights from Transformer-based Statistical Learning, ISBN: 9798382590202, 2024.
- ◇ **Doctoral Degree:** Successfully defended doctoral dissertation and graduated in May 2024.
- ◇ **Won Top 5% Performer:** NIH-supported Preterm Birth Prediction–Microbiome DREAM Challenge, 2022.
- ◇ **Ph.D. Candidacy:** Mathematics with a Concentration in Statistics, 2022.
- ◇ **Master's Thesis:** Successfully defended master's thesis, "Bayesian Reliability Analysis for Optical Media Using Accelerated Degradation Test Data," 2020.