

PENGYUAN CHEN

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POSITION

University of West Georgia

Assistant Professor

Department of Computing and Mathematics

August 2026-

EDUCATION

University of Kentucky

PhD in Statistics

Dissertation topic: Novel Nonparametric and Multivariate Methods for Circular Data

Overall GPA: 3.72

May 2026

Columbia University

M.A. in Statistics

Overall GPA: 3.4

December 2019

Purdue University

B.S. in Mathematics & Statistics

Minor in Economics

Overall GPA: 3.61

May 2018

TEACHING EXPERIENCE

University of West Georgia

Assistant Professor

Fall 2026-

Lexington, KY

- STA 1401: Elementary Statistics
- STA 4213: Mathematical Statistics

Fall 2026

University of Kentucky

Primary Instructor

Fall 2025-Spring 2026

Lexington, KY

- STA 296: Statistical Methods and Motivations
- STA 210: Making Sense of Uncertainty: An Introduction To Statistical Reasoning

Fall 2025

Spring 2026

University of Kentucky

Graduate Teaching Assistant

Spring 2021-now

Lexington, KY

- STA 210: Making Sense of Uncertainty: An Introduction to Statistical Reasoning
- STA 296: Statistical Methods and Motivations
- MATH/STA 320: Introductory Probability
- STA 602: Introduction to Statistical Methods
- STA 678: Statistical Computational Theory and Data Visualization: R and SAS
- STA 525: Introductory Statistical Inference
- STA 656: Statistical Quality Control
- STA 570: Basic Statistical Analysis
- STA 654: Bayesian Inference

Spring 2021

Spring 2022, Summer 2022, Fall 2022, Spring 2023, Summer 2023

Fall 2021, Fall 2022, Spring 2023

Fall 2023

Fall 2022, Fall 2023

Spring 2024

Spring 2024

Fall 2024, Spring 2025

Spring 2025

Purdue University

Undergraduate Teaching Assistant

Spring 2018

West Lafayette, IN

- STAT 512: Applied Regression Analysis
- ECON 352: Intermediate Macroeconomics

Spring 2018

Spring 2018

WORKING EXPERIENCE

Department of Biostatistics, University of Kentucky

Graduate Research Assistant

May 2021-August 2022

Lexington, KY

- Built statistical models for nonparametric regression.
- Implemented the methods in R to conduct simulation studies and to analyze real world data sets based on our need.
- Skills: Nonparametric regression, image detection, statistical models, R programming

Predictive Analytics and Data Science Hub, University of Kentucky

Graduate Research Assistant

Summer 2024

Lexington, KY

- Created a spectroscopy guideline with a highly accurate prediction model for soil properties using machine learning or deep learning algorithms.
- Visualized data findings to compare different models and prepared a manuscript and R package for publication.
- Collaborated with cross-disciplinary teams to enhance data interpretation and application.
- Provided consultation on data analysis, model design, data visualization and interpretation of results for people from various backgrounds, including biostatistics, medical research, agriculture, etc.
- Skills: Random Forest, R Markdown, SAS, Machine Learning, R package

China Merchants Bank

Intern

May 2016 - July 2016

Nanjing, China

- Updated bank loans to reflect principal payments and weekly interest payments from clients.
- Familiarized the banking operation by rotating in personal banking sector, corporate banking sector and investment banking sector.
- Performed customer transactions for consumers and small business accounts.

PUBLICATIONS

Pengyuan Chen, Christopher Clingensmith, Chenglong Ye, Sabine Grunwald, Katsutoshi Mizuta (2025). MLSP. R Package

Manuscripts in preparation

Pengyuan Chen, Derek Young (2025+). Some Uses of Classic Dimension Reduction Methods for Circular Regression Modeling. Manuscript submitted for publication.

Pengyuan Chen, Derek Young (2025+). Tolerance intervals for Circular Data. Manuscript submitted for publication.

Richard Charnigo, Pengyuan Chen, Qiang Cheng, and Peihua Qiu (2025+). Estimating almost smooth boundaries with corners.

Pengyuan Chen, Derek Young (2025+). Nonparametric Tests and Multiple Comparisons for Circular Data

Katsutoshi Mizuta, Frank Sikora, Chenglong Ye, Pengyuan Chen, Penny, Warren (2025+). Revolutionizing Soil Analysis: Cutting-Edge Spectroscopy for Kentucky's Agricultural Future.

CONFERENCES

Presentations

"Circular Regression", Joint Statistical Meeting, Portland, Oregon, August 2024.

"Circular Regression", KY ASA Spring Meeting, Lexington, Kentucky, March 2024.

"Nonparametric Tests and Multiple Comparisons for Circular Data", KY ASA Spring Meeting, Lexington, Kentucky, April 2025.

"Nonparametric Tests and Multiple Comparisons for Circular Data", NISS Virtual New Researchers Conference, Lexington, Kentucky, June 2025.

Poster

"Circular Regression", The Southern Regional Council on Statistics (SRCOS) Summer Research Conference (SRC), Clemson, South Carolina, June 2024.

AWARDS

Boyd Harshbarger Travel Award, The Southern Regional Council on Statistics (SRCOS) Summer Research Conference (SRC), Clemson, South Carolina, June 2024.

CERTIFICATIONS

SAS Certified Clinical Trials Programmer for SAS 9 *Jan 2021*

SAS Certified Advanced Programmer for SAS 9 *June 2019*

SAS Certified Base Programmer for SAS 9 *Jan 2019*

PROJECTS

Fraud Detection of Online Transaction September 2019 – December 2019
Columbia University *New York, NY*

- EDA: Used mean, mode and multiple imputation to handle missing data; used SMOTE from imblearn over-sampling to handle imbalanced data.
- Feature Selection: Chose Time consistency + Correlation Test + Lasso from 9 procedures based on precision, recall, AUC from sklearn.metrics as well as efficiency.
- Model Selection: Compared logistic regression, SVM, Random Forest, XGBoost and light GBM from sklearn to select the one which brings the best performance based on precision, recall and AUC

GAN September 2019 – December 2019
Columbia University *New York, NY*

- Used layers from tensorflow.keras package to implement a GAN with CNN layers on MNIST and SVHN data.
- Used matplotlib.pyplot to visualize samples from the model and compare them to real data Explored different architecture of neural networks and hyperparameters

Multitasking Experiment October 2017 – December 2017
Purdue University *West Lafayette, IN*

- Proposed a factorial design with two treatment factors and one block factor to assess the question whether multitasking is more efficient than sequential-tasking and did hypothesis testing on all the factors

TECHNICAL STRENGTHS

Computer Languages	R, SAS (advanced), Python (intermediate), Matlab, SQL (basic)
Tools	Excel, Access