

Chengxin Gong

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EDUCATION

- **Peking University** Beijing, China
Undergraduate, School of Mathematical Sciences September 2019 - July 2023
- **Peking University** Beijing, China
Doctoral candidate, School of Mathematical Sciences September 2023 - present

RESEARCH INTERESTS

- **Computational Statistics, Bayesian Statistics, High-Dimensional Statistics:** Fit an unknown distribution and then sample from it, conduct Bayesian inference and derive some useful generalization bounds.
- **Statistical Learning, Artificial Intelligence:** Develop new machine learning methods or apply old ones to analyse the inner structure and futural tendency of the time series and help humans to make more scientific decisions.

RESEARCH EXPERIENCES

- **Automated Model Selection for A Two-Layer Mixture Model of Gaussian Process Functional Regressions (TMGPFR):** I conducted a research supervised by Dr. Jinwen Ma of Peking University, which mainly focuses on improving a two-layer mixture model of GPFR for unsupervised learning, high-dimensional statistics and pattern recognition, designing the corresponding algorithm(s) or penalty function(s) for automated model selection and applying our model to some realistic problems, such as clustering analysis and data prediction. Our model with our algorithm can fit and cluster the unlabelled time series simultaneously, detect the patterns and predict the possible events for a brand new data set with massive missing sample points.

SKILLS

- **Programming Languages:** Python, Matlab, C/C++
- **Languages:** Chinese, English
- **Social Positions:**
The 13th president of PKU Association of Railway Culture Enthusiasts (July 2021 - June 2022)
The 14-15th routine director of PKU Association of Railway Culture Enthusiasts (July 2022 - present)

HOBBIES

- **Cities Skylines:** A game of building a city.
- **All of Transportation:** Railway, aircraft, subway, etc.
- **Geography, Relic, Sociology, Education:** Witness of past, present and future.
- **Enjoying Delicious Dishes:** Maybe I have an unusually keen taste.