

# YONG LIU

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Homepage: <https://wenweithu.github.io/>

[Google Scholar \(Citation 2k+\)](#)  $\diamond$  [GitHub](#)  $\diamond$  [ORCID](#)

## EDUCATION

### Ph.D. in Software Engineering

School of Software, Tsinghua University

Advisor: [Prof. Mingsheng Long](#)

Aug. 2021 – Present

Beijing, China

### Bachelor in Software Engineering, Tsinghua University

School of Software, Tsinghua University

GPA: 3.63/4.0 Rank: 2/84

Aug. 2017 – July 2021

Beijing, China

### Bachelor in Economics, Tsinghua University (*Second Degree*)

School of Economics and Management, Tsinghua University

Aug. 2018 – July 2021

Beijing, China

## RESEARCH INTERESTS

My research interests cover **Time Series Analysis** and **Deep Learning**. I am currently working on foundation time series models, large time series models, and multi-modal time series models. In addition to pure research, I also dedicate myself to promoting research on valuable real-world applications. My research aims to contribute to the advancement of intelligent systems capable of handling massive and complicated temporal data across domains, including finance, healthcare, industry, and environment.

## PUBLICATIONS AND PREPRINTS

*AutoTimes: Autoregressive Time Series Forecasters via Large Language Models* **NeurIPS 2024**

**Yong Liu\***, Guo Qin\*, Xiangdong Huang, Jianmin Wang, Mingsheng Long#

*Timer: Generative Pre-trained Transformers Are Large Time Series Models* **ICML 2024**

**Yong Liu\***, Haoran Zhang\*, Chenyu Li\*, Xiangdong Huang, Jianmin Wang, Mingsheng Long#

*iTransformer: Inverted Transformers Are Effective for Time Series Forecasting* **ICLR 2024**

**Yong Liu\***, Tengge Hu\*, Haoran Zhang\*, Haixu Wu, Shiyu Wang, Lintao Ma, Mingsheng Long#

– Deployed in Ant Group and Huawei Cloud ([Github Stars 1.4k+](#), [ICLR Spotlight](#), [Cite 450+](#))

*Koopa: Learning Non-stationary Time Series Dynamics with Koopman Predictors* **NeurIPS 2023**

**Yong Liu\***, Chenyu Li\*, Jianmin Wang, Mingsheng Long#

*Non-stationary Transformers: Exploring the Stationarity in Time Series Forecasting* **NeurIPS 2022**

**Yong Liu\***, Haiwu Wu\*, Jianmin Wang, Mingsheng Long# ([Github Stars 480+](#), [Cite 450+](#))

*TimesNet: Temporal 2D-Variation Modeling for General Time Series Analysis* **ICLR 2023**

Haiwu Wu\*, Tengge Hu\*, **Yong Liu\***, Hang Zhou, Jianmin Wang, Mingsheng Long# ([Cite 820+](#))

*TimeXer: Empowering Transformers for Time Series Forecasting with Exogenous Variables*

Yuxuan Wang\*, Haixu Wu\*, Jiaxiang Dong, Guo Qin, Haoran Zhang, **Yong Liu**, Yunzhong Qiu,

Jianmin Wang, Mingsheng Long#

**NeurIPS 2024**

*Ranking and Tuning Pre-trained Models: A New Paradigm for Exploiting Model Hubs* **JMLR 2022**

Kaichao You\*, **Yong Liu\***, Ziyang Zhang, Jianmin Wang, Michael I. Jordan, Mingsheng Long#

*LogME: Practical Assessment of Pre-trained Models for Transfer Learning* **ICML 2021**

Kaichao You\*, **Yong Liu\***, Jianmin Wang, Mingsheng Long#

([Cite 200+](#))

*Deep Time Series Models: A Comprehensive Survey and Benchmark*

arXiv Preprint 2024

Yuxuan Wang\*, Haixu Wu\*, Jiaxiang Dong, **Yong Liu**, Mingsheng Long, Jianmin Wang#

\* Equal Contribution, # Corresponding Author

## APPLICATIONS AND PROJECTS

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### Algorithm Development and Package

- *Time-Series-Library*: Deep Models for Time Series Analysis ([GitHub Stars 7k+](#)) *Co-Author*
- *Transfer-Learning-Library*: Algorithms for Transfer Learning ([GitHub Stars 3k+](#)) *Committer*

### Open-Source Models for Time Series

- *iTransformer*: Foundation Multivariate Time Series Model ([GitHub Stars 1.4k+](#)) *Maintainer*
- *Timer*: Large Time Series Model for Time Series Analysis ([GitHub Stars 400+](#)) *Maintainer*
- *Non-stationary Transformers*: Transformers for Non-stationary Forecasting *Maintainer*
- *Koopa*: Theory-Inspired Efficient Forecaster for Non-stationary Time Series *Maintainer*

### Systems and Applications

- *Apache IoTDB - AINode*: [Native AI Analysis in Time Series Database](#) *Project Leader*
- *iTransformer*: Green Computing of Ant Group ([Tons of Carbon Dioxide Saved](#)) *First Author*

## INVITED TALKS

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- **Exploring Large Models for Time Series** at IoA, CAS. [[Slides](#)] *June 20, 2024*
- **Deep Learning for Time Series Applications** at DoA, THU. [[Slides](#)] *May 25, 2024*
- **Large Models for Native Database Analysis** at TPCTC 2024. [[PDF](#)] *Aug 30, 2024*

## SERVICES AND EXPERIENCES

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### Reviewer & PC Member

- International Conference on Learning Representations (ICLR) *2024*
- International Conference on Machine Learning (ICML) *2022-2024*
- International Conference on Very Large Databases (VLDB) *2023*
- Conference on Neural Information Processing Systems (NeurIPS) *2023-2024*

### Teaching Experiences

- TA, Database System of [Prof. Jianmin Wang](#) *Spring 2024*
- TA, Machine Learning of [Prof. Mingsheng Long](#) *Fall 2021-2023*
- TA, Deep Learning of [Prof. Mingsheng Long](#) *Fall 2021-2022*
- TA, Introduction to Artificial Intelligence of [Prof. Mingsheng Long](#) *Spring 2021-2022*

## SELECTED AWARDS

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- Outstanding Papers of Beijing [[Certificate](#)] *2021*
- Outstanding Graduates of Beijing [[Certificate](#)] *2021*
- Excellent Graduates of Tsinghua [[Certificate](#)] *2021*
- Future Scholar Scholarship, Tsinghua University *2021*
- Boeing Scholarship, Tsinghua University *2020*
- Tang Lixin Scholarship, Tsinghua University *2020*
- Jiang Nanxiang Scholarship, Tsinghua University *2019*
- Huawei Scholarship, Tsinghua University *2018*