# YONG LIU

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

Google Scholar (Citation 2.6k+)  $\diamond$  GitHub  $\diamond$  ORCID

### **EDUCATION**

Ph.D. in Software Engineering

School of Software, Tsinghua University

Beijing, China Advisor: Prof. Mingsheng Long

Bachelor in Software Engineering, Tsinghua University

School of Software, Tsinghua University

GPA: 3.63/4.0 Rank: 2/84

Bachelor in Economics, Tsinghua University (Second Degree)

School of Economics and Management, Tsinghua University

Beijing, China

Beijing, China

Beijing, China

## RESEARCH INTERESTS

My research interests cover **Deep Learning** and **Time Series Analysis**. I am currently working on time series foundation models, domain-specific time series models, and multi-modal 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.

### SELECTED PUBLICATIONS AND PREPRINTS

Sundial: A Family of Highly Capable Time Series Foundation Models

Yong Liu\*, Guo Qin\*, Zhiyuan Shi, Zhi Chen, Caiyin Yang,

Xiangdong Huang, Jianmin Wang, Mingsheng Long#

(Intro.)

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

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

iTransformer: Inverted Transformers Are Effective for Time Series Forecasting

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

Deployed in Ant Group (CCF Foud)

(Github Stars 1.4k+, ICLR Spotlight, Cite 600+)

Non-stationary Transformers: Exploring the Stationarity in Time Series Forecasting NeurIPS 2022 Yong Liu\*, Haiwu Wu\*, Jianmin Wang, Mingsheng Long# (Github Stars 500+, Cite 500+)

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 1000+)

AutoTimes: Autoregressive Time Series Forecasters via Large Language Models

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

Koopa: Learning Non-stationary Time Series Dynamics with Koopman Predictors NeurIPS 2023 Yong Liu\*, Chenyu Li\*, Jianmin Wang, Mingsheng Long#

Deep Time Series Models: A Comprehensive Survey and Benchmark
Yuxuan Wang\*, Haixu Wu\*, Jiaxiang Dong, Yong Liu, Mingsheng Long, Jianmin Wang#

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

(Cite 200+)

# APPLICATIONS AND PROJECTS

• Huawei Scholarship, Tsinghua University

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	
• $iTransformer$ : Multivariate Time Series Forecaster (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
• OpenLTM: Open Codebase of the Architecture of Large Time-Series Models	Maintainer
Systems and Applications	
• Apache IoTDB - AINode: Native AI Analysis in Time Series Database	Project Leader
• <i>iTransformer</i> : Green Computing of Ant Group [Certificate 1] [Certificate 2]	First Author
INVITED TALKS	
• 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	
Reviewer & PC Member	
• International Conference on Learning Representations (ICLR)	2024-2025
• International Conference on Machine Learning (ICML)	2022-2024
• Conference on Neural Information Processing Systems (NeurIPS)	2023-2025
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 Sp	ring 2021-2022
SELECTED AWARDS	
Outstanding Papers of Beijing [Certificate]	2021
• Outstanding Graduates of Beijing [Certificate]	2021
	2021
• Excellent Graduates of Tsinghua [Certificate]	
<ul> <li>Excellent Graduates of Tsinghua [Certificate]</li> <li>Future Scholar Scholarship, Tsinghua University</li> </ul>	2021
	2021 2021 2021
• Future Scholar Scholarship, Tsinghua University	2021 2021

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