

# Tiannuo Yang

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## EDUCATION

### Nankai University

*M.E. in Computer Science (Advisor: Prof. Yusen Li)*

Tianjin, China

Aug. 2022 – Present

### University of Science and Technology Beijing

*BMgmt in Information Management and Information System (Major GPA: 3.98/4.0)*

Beijing, China

Aug. 2018 – June 2022

### Southern Taiwan University of Science and Technology

*Exchange Program in Information Management (GPA: 4.3/4.3)*

Taiwan, China

Sep. 2019 – Jan. 2020

**Language:** IELTS (7/9); College English Test-6 (589, Top 10%).

## RESEARCH INTERESTS

Machine Learning for Computer Systems - Particularly on Automated Performance Tuning.

## HONORS AND AWARDS

First-Class Gongneng Scholarship (bonus: 12,000 yuan, top 10%), Nankai University, 2023.

National 3rd Prize (bonus: 10,000 yuan), Massive Storage Competition, Huawei, 2022.

Provincial Gold Prize (Cooperated with Huawei), 'Internet+' Innovation and Entrepreneurship Competition, 2021

National 2nd Prize (top 2% - 4%), Contemporary Undergraduate Mathematical Contest in Modeling, 2020.

Excellent Merit Student (top 8%), University of Science and Technology Beijing, 2020.

## PUBLICATIONS

Performance Tuning:

- **Yang T.**, Hu W., Peng W., Li Y.\*, Li J.\*, Wang G. and Liu X., 2024. VDTuner: Automated Performance Tuning for Vector Data Management Systems. *ICDE*.
- **Yang, T.**, Chen, R., Li, Y.\*, Liu, X. and Wang, G., 2023. CoTuner: A Hierarchical Learning Framework for Coordinately Optimizing Resource Partitioning and Parameter Tuning. *ICPP*.

Operations Research:

- **Yang, T.\***, Chu, Z. and Wang, B., 2023. Feasibility on the integration of passenger and freight transportation in rural areas: A service mode and an optimization model. *Socio-Economic Planning Sciences* (SCI, JCR Q1; Graduation Project About Operations Research).

Others:

- .., **Yang T.**, (Co-First Author), .. and Zeng X.\*, 2023. On the Opportunities of Green Computing: A Survey. *arXiv* (Writing Section: 6.4 Resource Optimization).
- Yang W., **Yang, T.**, Li, Y.\*, Wang, G. and Liu, X., 2023. Efficient Multi-GPU Parallel Pipeline Rendering Architecture. *Working Paper*.

## RESEARCH INTERNSHIPS

### Research Intern | Ant Group

*Optimizing Large Language Model Infrastructure - Vector Database*

Beijing, China

June 2023 – Present

- Designed a polling-based multi-objective Bayesian optimization framework to auto-configure vector database.
- Published a research paper (as the first author) to ICDE 2024 (<https://github.com/tiannuo-yang/VDTuner>).

## ACADEMIC COMPETITIONS

### 7th National 'Internet+' Innovation and Entrepreneurship Competition

*AITU: Intelligent Tuning of Cloud Services (Cooperated with Huawei)*

Industrial Track

Dec. 2021

- Tuned 100+ OS- and application-level parameters of cloud services (e.g., big data, middleware) on OpenEuler OS.
- Improved the performance up to 250% (for OpenGauss) through dimension reduction and iterative optimization.
- Won the Provincial (Tianjin) Gold Prize and nominated for the national finals.