**Busheng Zhang**

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Personal blog: https://gdshjzm.github.io/resume.html

**Education Background**

**Beijing University of Posts and Telecommunications Hainan，CN**

2023 undergraduate of the major of Information and Computing Science 2023.9 until now

* **GPA:** **3.67**
* **Comprehensive Rank：11/83**
* **Relevant courses:** Mathematical Analysis, Linear Algebra, Probability Theory and Mathematical Statistics, Advanced C Language Programming, Data Structures, Ordinary Differential Equations, Data Analysis and Exploratory Data Science, Mathematical Modeling, Numerical Analysis, Computer Networks, Introduction to Artificial Intelligence
* **National-level awards:** Second Prize in the 2024 National Physics Experiment Competition (National Level)
* **National-level awards:** Second Prize in the 2024 China Robot and Artificial Intelligence Competition (National Level)
* **Provincial and ministerial-level awards:** First Prize of Hainan Province in the 2025 Hainan Province Higher Education Society Cup National Undergraduate Mathematical Modeling Competition
* **Provincial and ministerial-level awards:** Second Prize of Hainan Province in the 2025 China International Innovation Competition

**Scientific Research**

**BUPT GammaLab：GraphLLM Zero-shot Adversarial Analysis** **Beijing，CN**

*Teammate, Contributor* 2025.7 till now

* This research is conducted under the guidance of Dr. Shichuan in GammaLab, the Data Mining Laboratory of Beijing University of Posts and Telecommunications. The performance of GraphLLM models has been continuously improving in recent years, but they still have low robustness in zero-shot learning tasks. This research is committed to enhancing the zero-shot learning robustness of GLM using adversarial training methods and is still ongoing. Currently, there is an average improvement of 21% in zero-shot performance across 8 sets of zero-shot datasets.
* I joined this research midway, mainly responsible for experimental testing, reproduction of existing work, and preliminary research. Currently, I have used the ZeRO strategy to reduce the memory consumption of full-parameter fine-tuning to 30% of the originally required amount.

**Experiences**

**Long-term work: PiMath: A scientific computing library based on the domestic Cangjie programming language** **Hainan，CN**

*Teammate，Contributor* 2025.5 till now

* The main goal of the PiMath project is to implement convenient basic algebraic operations, especially operations related to matrices in linear algebra, based on the domestic Huawei Cangjie programming language, and on this basis, to provide assistance for scientific research and engineering practice in various fields.
* I joined the team midway and was fortunate to develop this scientific computing library together with Dr. Zhang Wenbo. My current work is to build the underlying codebase for the symbolic operation sub-module of PiMath, enabling PiMath to support symbolic operations. The main implementation method uses Abstract Syntax Tree (AST), and I have currently completed the construction of classes and basic methods for character operations.

**Hardware UAV Operation: Wildlife Recognition by UAV Based on YOLO** **Beijing，CN**

*Teammate，Contributor* 2025.7-2025.8

* The problem for the 2025 Summer National Undergraduate Electronic Design Competition was to have a drone cruise over a specific area, identify and return the positions of corresponding wildlife cards to simulate a real wildlife recognition scenario. The team used an efficient tracking algorithm, and completed the cruise with a drone driven by SLAM Raspberry Pi and a flight control board. A total of three teams from Hainan College won the second prize of Beijing.。
* I was primarily responsible for the Yolo visual recognition system part during the development process. I used the Yolov8-small model to achieve autonomous recognition of wild animals, fully participated in the model's dataset collection, model training, and testing (with an accuracy rate of 95%), completely implemented the relevant technology stack, and achieved 98% recognition on the Raspberry Pi (an edge device) with limited computing power. I also participated in part of the drone debugging and the end-side deployment of the Yolo model.。

**CogniGenius：AI Intelligent Tutoring Platform Based on RLM** **Hainan，CN**

*Team leader，Algorithm enginering* 2025.1- 2025.6

* The CogniGeniusAI Intelligent Tutoring Project is a learning software that integrates artificial intelligence and big data, designed to create a personalized mathematics learning experience for primary and middle school students. The project combines AI large models and mathematical computing models to analyze students' habits and abilities, intelligently recommend learning paths and resources, help students overcome difficulties, and improve learning effects. Among them, CoT reasoning enhancement is a highlight, which effectively improves students' mathematical abilities. At present, it has won many provincial and ministerial as well as national awards and is being promoted to the national competition for evaluation.
* I served as a core member in the project, responsible for formulating the technical roadmap and technical framework for the entire team, as well as selecting, fine-tuning, and deploying the team's core AI problem-solving model. A chain-of-thought was embedded within the model, and the MATH dataset was used for fine-tuning, initially achieving an accuracy rate of 95.25% on the college entrance examination dataset.
* The project has won awards such as the National Second Prize in the China Robot and Artificial Intelligence Competition and the Bronze Prize in Hainan Province of the China International Innovation Competition.

**Other Experiences**

**Students’ Union of BUPT-QMUL Hainan** **Hainan，CN**

*Desgination* 2023.9-2024.6

Using AI and Photoshop to create posters for various student club and department activities, as well as special events, etc.

**Skills and Hobbies**

**Language：**Chinese – Native. English - Fluent (CET - 4: 560, IELTS: 6.5)

**Skills：**Pytorch, Hugging Face large model full-stack development, Hardware engineering, SLAM, data analysis, machine learning, deep learning, large models, reinforcement learning.

**Practices：**

* Practice at Yazhou Bay Science and Technology City,
* 2024 Shenzhen Product Manager Conference