

# Zirui Zhang

 Zirui Zhang |  ZhangzrJerry |  0009-0008-4156-1652  
Hong Kong / Guangzhou / Shenzhen - China




## EDUCATION

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- **Hong Kong University of Science and Technology** Sep. 2024 - Present  
*Bachelor of Engineering* Hong Kong, China
  - GPA: 3.69/4.30





## EXPERIENCE

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- **Next Innovation STEM Center**  Sep. 2024 - Present  
*Robotics Engineer* Guangzhou, China
  - Responsible for the development of planning and control in locomotion robot
- **Rhino-Bird Middle School Science Research Training Program**  Jun. 2023 - Oct. 2023  
*Research Intern* Remote
  - Supervised by Professor Chuan Shi from BUPT
  - Developed an intelligent book recommendation system to improve the accuracy of public library services
  - Won the Excellent Award in 2023 Rhino-Bird Middle School Science Research Training Program
- **Guangzhou Yingcai Middle School Science Research Training Program**  Jan. 2022 - Aug. 2022  
*Research Trainee* Guangzhou, China
  - Supervised by Professor Yi Cai from SCUT
  - Focused on the construction of knowledge graph





## INVOLVEMENT

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- **FIRST Robotics Competition Team 8214**  Sep. 2024 - Present  
*Program Mentor* Guangzhou, China
  - Responsible for the development of the FRC robotics control system
- **FIRST Robotics Competition Team 6399**  Jul. 2024 - Aug. 2024  
*Program Mentor* Jinan, China
  - Responsible for the development of the FRC robotics control system and provided programming instruction to the team
- **FIRST Robotics Competition Team 8811**  Sep. 2021 - Aug. 2023  
*Founder, Youth Mentor* Guangzhou, China
  - Established the team in my senior high school and raised over \$14,000 in the first year
  - Conducted over 60 weekly studies and 3 holiday training programs for our team in 2 years
- **FIRST Robotics Competition Team 8011**  Sep. 2019 - Jun. 2023  
*Team Captain, Program Leader* Guangzhou, China
  - Led the team to the Champion in the 2020 We RoboStar Robotics League as the Program Leader
  - Steered the team to Rookie Game Changer Award in the 2021 INFINITE RECHARGE At Home Challenge
  - Won the Excellence in Engineering Award with my teammates in 2022 Hangzhou Regional

## PROJECTS

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- **FRC 2024 Robot - Defiant** Jun. 2024 - Aug. 2024  
*Tools: JAVA, AprilTag* 
  - Mainly responsible for the development of AprilTag based VO and IMU Coupled Localization
- **Intelligent Book Recommendation and User Interest Analysis System** Jun. 2023 - Oct. 2023  
*Tools: Flask, PaddlePaddle* 
  - Mainly responsible for model training and back-end database development
- **FRC Data Collection Software** Feb. 2022 - Aug. 2022  
*Tools: WXML, Node.js* 
  - Mainly responsible for front-end logic and back-end database development
- **A Single-Wheeled Self-Balancing Omni-directional Mobile Platform** Sep. 2021 - Mar. 2022  
*Tools: SolidWorks, LCEDA, C++* 
  - Mainly responsible for control algorithms and embedded development

- [S.1] Zirui Zhang and Yue Peng. (2023). **FRC Data Collection Software**. China National Intellectual Property Administration, Patent No. 2023SR1385127. Publication Date: 2023-11-06.
- [T.1] Zirui Zhang and Yue Peng. (2023). **Intelligent Book Recommendation and User Interest Analysis System Based on Factorization Machines**. *2023 Tencent Rhino-Bird Middle School Science Research Training Program*
- [P.1] Liangyu Cai, Zihan Chen, Zirui Zhang et al. (2022). **Single-wheel balance motion device**. China National Intellectual Property Administration, Patent No. CN115107901A. Publication Date: 2022-09-27.