

# Xuan Ju

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## EDUCATION

### Tongji University

B.S. in Computer Science

Shanghai, China

Sep 2018 - Jul 2022

- GPA: 4.83/5.0
- Relevant Coursework: Chinese Information Processing, Pattern Recognition, Data Mining, Data Structures, Operating Systems, Principle of Compilers, Computer Organization, Computer Networks, Software Engineering, etc.

Mathematical Intensive Training Class (Innovation Experimental Area, Minor Degree)

Sep 2018 - Jan 2020

- Relevant Coursework: Mathematical Analysis, Advanced Algebra, Theory of Probability, Statistics, Discrete Mathematics, Combinatorics, Numerical Analysis, Complex Analysis, Ordinary Differential Equation, etc.

## HONORS & AWARDS

- National Scholarships (Oct 2021)
- Outstanding Award in "Challenge Cup" Undergraduate Contest of Extracurricular Academic and Scientific Work (Shanghai division) (May 2021)
- Honorable Mention in Mathematical Contest In Modeling (Apr 2021)
- Tongji University Student Aid Publicity Ambassador (Apr 2021)
- Outstanding Student of Tongji University (Jan 2021)
- National Scholarships (Dec 2020)
- Guo Xie Birong Scholarship (Dec 2019)
- 3rd Prize in Tongji University Physics Competition (Oct 2019)

## PROJECT & EXPERIENCE

### Fault Detection of High-speed Railway Pantograph Based on Digital Image Analysis

Project Leader

Using image processing technology combined with YOLO v3 algorithm to accurately identify potential faults of train pantograph, including spark discharge, foreign bodies in contact lines and pantograph wear.

- Successfully concluded as a National College Student Innovation and Entrepreneurship Training Program in Jun 2020
- Awarded Tongji University Dream Fund in Nov 2019
- Entered the Entrepreneurship Valley of Tongji University in Oct 2019
- Reached cooperation agreement with CRRC Corp

### Intelligent Crop Disease Control Program Based on Deep Learning

The second author

Using deep convolutional neural network fine-grained image classification technology to recognize crop leaf images. Using semantic segmentation technology to segment agricultural remote sensing images. Trying to accurately identify crop diseases.

- Reached the national final of "Challenge Cup" Undergraduate Contest of Extracurricular Academic and Scientific Work in May 2021
- Filed an application for Chinese invention patent

## PUBLICATIONS

- Lin Y, Wu M, **Ju X**, et al. Finite Element Simulation Study on Wear under Pantograph-Catenary System with Electric Current[C]//2020 IEEE International Conference on High Voltage Engineering and Application (ICHVE). IEEE, 2020: 1-4. [\[Paper\]](#)
- Yang C, **Ju X**, Liu E, et al. Blockchain-based indoor location paging and answering service with truncated-geo-indistinguishability[J]. IET Blockchain, 2021. [\[Paper\]](#)

## MISCELLANEOUS

- **Skills:** C/C++, Python, MATLAB, Verilog HDL, HTML, JavaScript, CSS, Git, LaTeX, MySQL
- **Languages:** Mandarin (Native), English
- **Research Interests:** Artificial Intelligence, Computer Vision, Motion Understanding
- **Hobbies:** Ultimate Frisbee, Piano, Skiing
- **Activities:** The 4th place of the 9th Ningbo Open of Ultimate Frisbee, Outstanding Volunteer of the 47th Tongji University Sports Meeting, Voluntary Blood Donation in Shanghai, etc.