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# Yizhen Zhang

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## Education Background

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Nankai University, China

09/2020-06/2024

- *B.Sc. in Software Engineering, College of Software*

- **GPA: 90.12 / 100 | 3.76 / 4**

- **Core Courses:** Smart Mobile Development(100); Principles of Computer Organization(99); Software Engineering(99); Field Theory and Infinite Series Advanced(99); Java Language and Application(98); Data Science(97); Artificial Intelligence of Things (AIoT) Introduction(96).

Hong Kong Baptist University

09/2023-12/2023

- *Exchange Student*

- **Core Courses:** Principles of Psychology; Interviewing

## AWARDS & HONORS

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- *National Scholarship Award (2021-2022) (Rank 3 out of 146 in sophomore year);*

- Nankai University Gongneng Scholarship (2022-2023) (Rank 7 out of 152 in junior year);

- 2023 Nankai University-Huawei "Smart Base" Industry-Teaching Integration Collaborative Education Base Scholarships(2023);

- Outstanding Scholars of Fujian Talent Program (2021);

- Nankai University Social Welfare Award (2020-2021)

## PUBLICATIONS

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### Papers

- D. Cheng, L. He, Q. Yin, G. Han, **Y. Zhang**, Y. Liu et.al. "AddrProbe: A Transfer Learning-based Framework for Internet-wide IPv6 Active Address Probing", *SIGCOMM( Student second author, Under review)*

### Technology Patents

- "A watermark embedding method and a watermark extraction method" (**First author**, Patent number: CN117454335A, Time: 2023.10.09)

- "Method for embedding information in a document, method, and apparatus for recognizing information" (**First author**, Patent number: CN117313048A, Time: 2023.09.27)

## Research Experience

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- **Research Interests: Computer Networking, Video Understanding, Human-Computer Interaction (HCI)**

### "IPV6" Active Address Detection

02/2023-10/2023

Team member; Instructed by Lin He

- Mainly research to get as many globally active IPv6 addresses as possible with as few probing resources as possible

- Designed a model of ipv6 active address detection based on DBSCAN+CVAE and cluster transfer learning

- Mainly responsible for the investigation of the similarity of attributes between address patterns and the implementation of the alias prefix detection algorithm, and responsible for the code replication and experiments of 9 other related research works

### Design and Implementation of Multi-dimensional Indicator Anomaly Detection System for Line Base Stations

03/ 2022-04/2023

Team member; Instructed by Shenglin Zhang and Zhengdan Li

- Rated as one of the 100-program of Undergraduate Programs in Innovation and Entrepreneurship

- Design OCAT, a general framework for several current state-of-the-art MTS anomaly detection models, combining MTS clustering algorithms with adaptive migration learning strategies.

- Good performance in the research, recommended to the Institute for Network Sciences and Cyberspace, Tsinghua University for further research.

## Internship Experience

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### DataCloak

07/04/2023-27/07/2023

Algorithm intern

- Conducted research on algorithms related to document watermark and image watermark extraction in the CV engineering team

- **Produced two patent applications as the first author for document watermarking:** "A font replacement-based information hiding scheme for Office documents" and "A character position-based information hiding scheme for Office documents"

- Designed and implemented a system for locating and segmenting individual characters in images, using both traditional computer vision methods such as vertical projection and a computer vision approach combining deep learning with CRNN

### Chinasofti

07/ 2022-09/2022

Development manager; Software engineer; Testing engineer

- Successfully completed the training for the 'brand identification based on CNN+OpenCV items of the CSoft International Training Base' and participated in the closing item: 'monitoring and marking system of pop-ups identification in dynamic scenes.'

- Be in charge of the project's technological architecture and other responsibilities, including the development and integration of the opencv

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special effects, the training and improvement of the mobilenet model, the separation of the front and rear flask+vue, and the integration of the entire project.

- The whole team was awarded the 'Excellent Team of Chinasoft International Training Base'.

### **Extracurricular Activities**

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#### **Software School Career Development Department**

09/ 2021- 09/2022

*Ministry Director*

- Responsible for managing the affairs of the Career Development Department of the School of Management Software.
- Organized offline peer-to-peer meetings, alumni presentations, visits to the company 'Kirin Software', and resume competitions.

#### **Nankai University Badminton Club**

09/ 2021- 09/2022

*Youth League Secretary and Vice President*

- Participated in tournaments and player management, and organized the "Freshman Cup" badminton tournament.

### **Professional Skills**

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**Python/Java/C++/Kotlin (Proficient); CSS/HTTP(Basic); VUE/Javascript(Basic)**