

电子信息硕士专业学位论文

基于的研究

Research on

**一级学科（授权点）代码**： 0854

**一级学科（授权点）名称**： 电子信息

**二级学科（领域）代码**： 085401

**二级学科（领域）名称**： 新一代电子信息技术

**研 究 方 向：** 计算机视觉

中国矿业大学

二〇二五年四月

摘 要

后文

**关键词：**预祝；大家；能；顺利；毕业

**Abstract**

英文摘要

**Keywords:** flotation; cyclonic separation; separation mechanism; flotation kinetics; mineral separation

目 录

摘 要 I

目 录 III

图清单 V

表清单 VI

1 一级标题 1

1.1 二级标题 1

2 样例 2

2.1 样例 2

参考文献 4

作者简历 8

**Contents**

Abstract II

Contents IV

List of Figures V

List of Tables VI

1 One 1

1.1 English 1

2 title12580 2

2.1 English 2

References 4

Author’s Resume 8

图清单

|  |  |  |
| --- | --- | --- |
| 图序号 | 图名称 | 页码 |
| 图1‑1 | 应用样式列表 | 7 |
| Figure 1‑1 | list | 7 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

表清单

|  |  |  |
| --- | --- | --- |
| 表序号 | 表名称 | 页码 |
|  |  |  |
|  |  |  |
|  |  |  |

# 一级标题

**1 One**

英文目录制

## 二级标题（English）

### 自动保存

建议。

#### 格式应用

这是正

# 样例

**2 title12580**

## 样例（English）

在移动通信[1]。

### 公式样例

公式样例：



占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

占位

参考文献

[1] 邹铁刚, 刘建民, 张明臣. 移动通信网络优化技术与实践[M]. 1. 北京: 清华大学出版社, 2015.

[2] 王磊. 中国家庭结构变化及其政策意涵——对“人口规模巨大的现代化”的思考[J]. 人口与发展, 2023, 29(01): 118-122.

[3] Akhtar Z U A, Wang H. WiFi-based gesture recognition for vehicular infotainment system—an integrated approach[J]. Applied Sciences, 2019, 9(24): 5268.

[4] Mata T, Boonsrimuang P. An effective channel estimation for massive MIMO–OFDM system[J]. Wireless Personal Communications, 2020, 114: 209-226.

[5] Liu Y, Yu Z, Zong D, et al. Attention to task-aligned object detection for end–edge–cloud video surveillance[J]. IEEE Internet of Things Journal, 2023, 11(8): 13781-13792.

[6] Liu G, Shi H, Kiani A, et al. Smart traffic monitoring system using computer vision and edge computing[J]. IEEE Transactions on Intelligent Transportation Systems, 2021, 23(8): 12027-12038.

[7] Ismail M G, Tarabay F H, El-Masry R, et al. Smart cloud-edge video surveillance system[C]. 2022 11th International Conference on Modern Circuits and Systems Technologies (MOCAST): IEEE, 2022: 1-4.

[8] Li H, Yin K, Ji X, et al. Improved YOLOV3 surveillance device object detection method based on federated learning[C]. 2022 4th International Conference on Data-driven Optimization of Complex Systems (DOCS): IEEE, 2022: 1-6.

[9] Afandy P F, Ng P C, Plataniotis K N. Federated Learning for Hierarchical Fall Detection and Human Activity Recognition[C]. 2024 IEEE 10th World Forum on Internet of Things (WF-IoT): IEEE, 2024: 1-6.

[10] Alfarzaeai M S, Hu E, Peng W, et al. Coal gangue classification based on the feature extraction of the volume visual perception ExM-SVM[J]. Energies, 2023, 16(4): 2064.

[11] Hao X, Liang H. A multi-class support vector machine real-time detection system for surface damage of conveyor belts based on visual saliency[J]. Measurement, 2019, 146: 125-132.

[12] Girshick R, Donahue J, Darrell T, et al. Rich feature hierarchies for accurate object detection and semantic segmentation[C]. Proceedings of the IEEE conference on computer vision and pattern recognition, 2014: 580-587.

[13] He K, Zhang X, Ren S, et al. Spatial pyramid pooling in deep convolutional networks for visual recognition[J]. IEEE transactions on pattern analysis and machine intelligence, 2015, 37(9): 1904-1916.

[14] Girshick R. Fast r-cnn[C]. Proceedings of the IEEE international conference on computer vision, 2015: 1440-1448.

[15] Ren S, He K, Girshick R, et al. Faster R-CNN: Towards real-time object detection with region proposal networks[J]. IEEE transactions on pattern analysis and machine intelligence, 2016, 39(6): 1137-1149.

[16] Redmon J, Divvala S, Girshick R, et al. You only look once: Unified, real-time object detection[C]. Proceedings of the IEEE conference on computer vision and pattern recognition, 2016: 779-788.

[17] Liu W, Anguelov D, Erhan D, et al. Ssd: Single shot multibox detector[C]. Computer Vision–ECCV 2016: 14th European Conference, Amsterdam, The Netherlands, October 11–14, 2016, Proceedings, Part I 14: Springer, 2016: 21-37.

[18] Xiao C K, Sun B, Wang Y L, et al. Foreign object detection of sintering transport belt based on CNN[J]. IFAC-PapersOnLine, 2021, 54(21): 25-30.

[19] Wang Y, Wang Y, Dang L. Video detection of foreign objects on the surface of belt conveyor underground coal mine based on improved SSD[J]. Journal of Ambient Intelligence and Humanized Computing, 2023, 14(5): 5507-5516.

[20] Zheng J, Wang D, Geng Z. Real-Time Detection of Safety Hazards in Coal Mines Utilizing an Enhanced YOLOv3 Algorithm[J]. Traitement du Signal, 2023, 40(4): 1565.

[21] Chen Y, Sun X, Xu L, et al. Application of YOLOv4 algorithm for foreign object detection on a belt conveyor in a low-illumination environment[J]. Sensors, 2022, 22(18): 6851.

[22] Li D, Wang G, Guo Y, et al. An identification and positioning method for coal gangue based on lightweight mixed domain attention[J]. International Journal of Coal Preparation and Utilization, 2023, 43(9): 1542-1560.

[23] 张磊, 王浩盛, 雷伟强, 等. 基于YOLOv5s-SDE的带式输送机煤矸目标检测[J]. 工矿自动化, 2023, 49(04): 106-112.

[24] 毛清华, 李世坤, 胡鑫, 等. 基于改进YOLOv7的煤矿带式输送机异物识别[J]. 工矿自动化, 2022, 48(12): 26-32.

[25] McMahan B, Moore E, Ramage D, et al. Communication-efficient learning of deep networks from decentralized data[C]. Artificial intelligence and statistics: PMLR, 2017: 1273-1282.

[26] Hegiste V, Legler T, Ruskowski M. Federated ensemble yolov5–a better generalized object detection algorithm[C]. 2023 Eighth International Conference on Fog and Mobile Edge Computing (FMEC): IEEE, 2023: 7-14.

[27] Rao L, Ma C, Ding M, et al. Sparse federated training of object detection in the Internet of Vehicles[C]. ICC 2023-IEEE International Conference on Communications: IEEE, 2023: 1768-1773.

[28] Zheng T, Li A, Chen Z, et al. Autofed: Heterogeneity-aware federated multimodal learning for robust autonomous driving[C]. Proceedings of the 29th annual international conference on mobile computing and networking, 2023: 1-15.

[29] Jia Z, Zheng H, Wang R, et al. FedDAD: solving the islanding problem of SAR image aircraft detection data[J]. Remote Sensing, 2023, 15(14): 3620.

[30] Guo Y, Tang X, Lin T. Fedbr: Improving federated learning on heterogeneous data via local learning bias reduction[C]. International Conference on Machine Learning: PMLR, 2023: 12034-12054.

[31] Li T, Sahu A K, Zaheer M, et al. Federated optimization in heterogeneous networks[J]. Proceedings of Machine learning and systems, 2020, 2: 429-450.

[32] Li Q, He B, Song D. Model-contrastive federated learning[C]. Proceedings of the IEEE/CVF conference on computer vision and pattern recognition, 2021: 10713-10722.

[33] Wang J, Liu Q, Liang H, et al. Tackling the objective inconsistency problem in heterogeneous federated optimization[J]. Advances in neural information processing systems, 2020, 33: 7611-7623.

[34] Ma X, Zhang J, Guo S, et al. Layer-wised model aggregation for personalized federated learning[C]. Proceedings of the IEEE/CVF conference on computer vision and pattern recognition, 2022: 10092-10101.

[35] Uddin M P, Xiang Y, Yearwood J, et al. Robust federated averaging via outlier pruning[J]. IEEE Signal Processing Letters, 2021, 29: 409-413.

[36] Huang Y, Chu L, Zhou Z, et al. Personalized cross-silo federated learning on non-iid data[C]. Proceedings of the AAAI conference on artificial intelligence, 2021: 7865-7873.

[37] Yu T, Kumar S, Gupta A, et al. Gradient surgery for multi-task learning[J]. Advances in neural information processing systems, 2020, 33: 5824-5836.

[38] Sun W, Zhang X, Lu H, et al. Resolve domain conflicts for generalizable remote physiological measurement[C]. Proceedings of the 31st ACM International Conference on Multimedia, 2023: 8214-8224.

[39] Zhao P, Yu W, Yang X, et al. Buffer data-driven adaptation of mobile video streaming over heterogeneous wireless networks[J]. IEEE Internet of things journal, 2017, 5(5): 3430-3441.

[40] Seid S, Zennaro M, Libsie M, et al. A low cost edge computing and LoRaWAN real time video analytics for road traffic monitoring[C]. 2020 16th International Conference on Mobility, Sensing and Networking (MSN): IEEE, 2020: 762-767.

[41] Da Silveira W A A, Mafra S B, Rodrigues J J, et al. Performance Evaluation of an IoT Edge-Based Computer Vision Scheme for Agglomerations Detection Covid-19 Scenarios[M].Intelligent Computing and Networking: Proceedings of IC-ICN 2021. Springer, 2022:1-12.

[42] Ke R, Zhuang Y, Pu Z, et al. A smart, efficient, and reliable parking surveillance system with edge artificial intelligence on IoT devices[J]. IEEE Transactions on Intelligent Transportation Systems, 2020, 22(8): 4962-4974.

[43] Sharma V K, Mir R N. A comprehensive and systematic look up into deep learning based object detection techniques: A review[J]. Computer Science Review, 2020, 38: 100301.

[44] Rajawat D, Lohani B P, Rana A, et al. Object Detection in Images and Videos Using OpenCV: A Comparative Study of Deep Learning and Traditional Computer Vision Techniques[C]. 2023 10th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON): IEEE, 2023: 141-146.

[45] Yang Y, Xie G, Qu Y. Real-time detection of aircraft objects in remote sensing images based on improved YOLOv4[C]. 2021 IEEE 5th Advanced Information Technology, Electronic and Automation Control Conference (IAEAC): IEEE, 2021: 1156-1164.

[46] 任鹏. 基于边缘计算和联邦学习的矿山目标检测[D]. 徐州: 中国矿业大学, 2022.

[47] Uijlings J R, Van De Sande K E, Gevers T, et al. Selective search for object recognition[J]. International journal of computer vision, 2013, 104: 154-171.

[48] Zitnick C L, Dollár P. Edge boxes: Locating object proposals from edges[C]. Computer Vision–ECCV 2014: 13th European Conference, Zurich, Switzerland, September 6-12, 2014, Proceedings, Part V 13: Springer, 2014: 391-405.

[49] Murthy C B, Hashmi M F, Bokde N D, et al. Investigations of object detection in images/videos using various deep learning techniques and embedded platforms—A comprehensive review[J]. Applied sciences, 2020, 10(9): 3280.

[50] Sirisha U, Praveen S P, Srinivasu P N, et al. Statistical analysis of design aspects of various YOLO-based deep learning models for object detection[J]. International Journal of Computational Intelligence Systems, 2023, 16(1): 126.

作者简历

一、基本情况

姓名：\*\* 性别：男 民族：汉 出生年月：2000-00-00 籍贯：江苏省徐州市

2018-09—2022-06 中国矿业大学信息与控制工程学院学士

2022-09—2025-06 中国矿业大学信息与控制工程学院攻读硕士学位

二、学术论文

1. \*\*. 论文名[J/OL].工程科学与技术, 2024, 12(7): 239. 【已被录用，中文EI，除导师外学生一作】

2. \*\*. 论文名[J/OL].工程科学与技术, 2024, 12(7): 239. 【已被录用，中文EI，除导师外学生一作】

三、专利软件

1. \*\*. 基于管理APP V1.0（登记号：\*\*\*）

四、获奖情况

1. 2022-2023学年中国矿业大学研究生一等学业奖学金

2. 2023-2024学年中国矿业大学研究生二等学业奖学金

3. 2024-2025学年中国矿业大学研究生二等学业奖学金

五、研究项目

1. 技术研究. 中央高校基本科研业务费专项资金项目, 编号：\*\*\*, 参与人员；

2. 选煤厂模块. 横向项目, 参与人员