

## CONTENTS

### Review Analysis

---

|   |       |
|---|-------|
| Research on Safety Testing Method for Autonomous Driving Based on Visual System in Complex Urban Road Conditions..... | 01-12 |
| Analysis of the Effectiveness of Artificial Intelligence Technology in Defect Prediction in Software Testing.....     | 13-16 |
| A Review of Model Training and Development in Satellite Remote Sensing Imagery.....                                   | 17-27 |

### Application Demonstration

---

|   |       |
|---|-------|
| The Mental Companion Mode of Nursing Robots—A Study on Affective Computing-Based Companionship Strategies for Alzheimer's Disease Patients..... | 28-34 |
| Innovative Applications and Challenges of Multimodal Artificial Intelligence Technology.....  | 35-38 |
| Ethical and Psychological Challenges in Human-AI Romantic Relationships: An Interdisciplinary Critical Study.....                               | 39-45 |
| From Replacement to Symbiosis: A Grounded Theory Study on AI-Assisted Teaching Models in Secondary School History Classrooms.....               | 46-52 |

### Frontier Prospects

---

|   |       |
|---|-------|
| Exploration of Innovative New Paths for Intelligent Empowerment in Software Testing and Evaluationy.....                | 53-56 |
| Discussion on Ethical Conflicts and Regulations Regarding the Abuse of Visual Recognition Systems in Public Spaces..... | 57-63 |
| Legal and Ethical Analysis Based on Three Autopilot Accidents.....  | 64-72 |