



Zhang Zhangwei

Summary

1. Rich practical implementation experience in enterprise deep learning projects, including model effect optimization, inference deployment
2. Proficient in target detection algorithms, familiar with other common deep learning and data mining algorithms
3. Familiar with Python, Sql, C++, Java, Pytorch, Paddle, TensorRT,
4. Understanding of big data distributed architecture, understanding of offline/streaming data and common frameworks, including Spark, Hadoop, Kafka, etc.
5. Entrepreneurial and enterprising spirit, strong communication and coordination skills, teamwork ability, cheerful personality

Experience

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| Algorithm Engineer - Poizon - Risk Management Department | 2021.05-present |
| Algorithm Engineer - Shumei Technology Co., Ltd - Tianjing Product Division | 2019.06-2021.05 |

Project Experience

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| Algorithm Engineer - Poizon E-commerce Platform AI+ Content Security Solution | 2021.05-present |
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Project Background: With the rapid development of the company's business, the content has become more and more complex, and the problem of content security has become increasingly serious; at the same time, the cost of manual audit has also increased rapidly, and there is an urgent need for algorithmic support for direct machine disposal; and external solutions, due to their generic properties, cannot meet the requirements of different disposal solutions for different scenarios of the company, so they need to build their own AI+ content security solutions.

Main problems:

1. High cost of manual audit of risky content
2. No internal AI+content security system
3. External solutions cannot solve the problem

Solution: Standardized construction, deep learning model development, increase the proportion of machine review from 20% to 80%



The main work: standardization of business problems, strategy algorithm platform, scene content characterization

1. Standardization of business issues: labeling the targets based on legal requirements, unifying the upstream and downstream risk content disposal targets
2. Platformization of strategy algorithm: abstract encapsulation of polymorphism, flexible response to business development and regulatory requirements
3. scenario content characterization: build a content feature library based on the model for direct disposal of different scenarios with different disposal efforts of machine audit
4. algorithm capability precipitation, including image target detection (yolov5-yolox-yolov7), image scene classification (multimodal blip), text classification (bert)

Algorithm Engineer - Shumei - 2B content security solutions (saas services) 2020.01-2021.05

Project Background: Internet enterprises have content compliance risks and need to filter non-compliant images related to politics, pornography, riot, contraband, etc. in real time. The current laws and regulations are complex, and enterprises maintain a high cost of self-researched risk control team, the number of beauty for the enterprise to provide saas services based content security solutions to escort the enterprise, so that enterprises can focus on their own core business development

The main problem:

1. Rely on human detection and screening slow speed, high cost
2. Many duplicated work
3. Slow response time to emergency risky events

Solution: Real-time risk content filtering using deep learning to reduce human review and save labor costs

Main tasks:

1. Target detection algorithm model development to detect risky targets within images
2. Track the latest machine learning algorithms, conduct performance and effect related experiments, analyze the results and write experimental reports
3. Combine the latest algorithms to optimize the performance and effectiveness of existing model structures
4. Main tools: pytorch, yolo series algorithms, darknet (C++)

Algorithm Engineer - Shumei - Fraudulent user mining based on user profiling (saas service)



2019.06-2020.01

Project Background: With the rapid rise of enterprise customer acquisition costs, the business concept of enterprises began to shift from transaction into a single type to user operation type. The essence is that enterprises need to spend money to buy traffic through marketing means, in which there will be fraudulent gangs posing as real users to grab promotions, swipe orders, coupons for cash and other fraudulent acts. The main problem: thin defense, standards are difficult to unify, poor defense timeliness, slow defense evolution

Solution:

1. Full-stack wind control system multi-point deployment and control
2. Detection of device tampering, device behavior anomalies
3. Blackmail portrait
4. SaaS service iterative operation

Main work.

1. Behavior feature design and mining based on customer business big data
2. Assigning labels to blackmail users by anomaly types, including: device association anomaly, behavior frequency anomaly, behavior timing anomaly
3. Main tools: spark, sparksql, simhash

Algorithm Engineer - Shumei - Deep learning based banking marketing fraud user mining (private)

2019.06-2020.01

Project background: Shanghai ICBC joint with Digital America to explore the potential of deep learning in financial anti-fraud

Main problem: Banks' Internet anti-fraud technology is backward, insufficient knowledge of blackmail, high requirements for data security, and little blackmail data

Solution:

1. Generate additional blackmail data and classify them using GAN
2. Blackmail portraits

Main work:

1. Privatization of big data platform deployment, data mining, feature engineering
2. Conditional GAN model development
3. Blackmail user portrayal system based on Connected Graph



4. Main tools: spark, sparksql, hadoop

School Research Project - Human-Computer Interaction - Eye-tracking for mobile devices

2017.06-2019.01

Project background: by analyzing users' eye-movement behavior can help enterprises analyze users' preferences for goods, layouts, etc. With the rapid popularity of mobile devices such as smartphones, research on eye-movement tracking technology for mobile devices has also been developed. However, due to the limited computing power of mobile devices, the traditional eye-tracking technology based on image feature model is susceptible to environmental impact when applied to mobile devices, which makes it difficult to extract image features accurately and reduces eye-tracking accuracy, which restricts the application of eye-tracking technology for mobile devices.

Solution:

1. Extract stable human eye geometry based on deep learning
2. Eye tracking based on geometric features
3. Cloud data fusion

Main work.

1. Extracting human eye geometry using deep learning to obtain more stable human eye geometry than traditional image processing methods
2. Development of eye-tracking system for mobile devices with multi-model fusion
3. Main tools: c++, opencv, tensorflow

Mobileization of on-campus academic affairs system (QR code, mobile web)

2015.03-2015.06

Library lending platform mobile (crawler, mobile web)

2014.03-2015.01

Education

Zhejiang University of Technology

2016-2019

Master of Computer Science and Technology - Computer Vision, Human-Computer Interaction

Zhejiang University, City College

2012-2016

B.S. Computer Science and Technology - Mobile Internet Technology



Qualifications

University English Level 6, Second Prize in University Research Competition, Second Prize in University Service Outsourcing Competition