LINA LIU

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Education

Hebei Normal University, Hebei Province, China - **Bachelor of Engineering** in Software Engineering
AVG Score: **89.28/100.0** GPA: **3.69/4.0** **Rank 1 / 387** (Web Development, Software Testing Basis, etc), 2011.09-2015.06
Graduate Thesis: Developed a **Web-based** Campus E-commerce System

University of Malaya, Kuala Lumpur, Malaysia - Semester II, 2013/2014 Academic Year, **Exchange Program**
Faculty of Sciences and Technology Center (Principle of Distributed Systems, Network Security, etc), 2014.01-2014.06

University of Chinese Academy of Sciences, Beijing, China - **Master of Engineering** in Computer Technology
GPA: **3.64/4.0** Ranking Not Applicable (Machine Learning on Big Data, Advanced AI etc), 2015.09-2018.06
Graduate Thesis: Conducted research on Distributed Cache System and Optimization Strategy based on Redis Cluster

Publications

LI Chong , LIU Li-Na , LIU Xue-Min , ZHANG Shi-Bo. *High Efficient Distributed Cache System Based on Redis Cluster*. Computer Systems and Applications, 2018,27(10):91-98

Research Interests

Software Engineering, Machine Learning, Deep Learning, Natural Language Processing, Data Analytics

Work Experience

NetEase (Hangzhou) Network Co., Ltd.   Hangzhou, China

Senior Algorithm Engineer, Hangzhou Research Institute, Full-time   2021.09-2023.04
- Led the development, testing, and maintenance of machine and deep learning algorithms on the NetEase Machine Learning Platform, providing inference services.
- Managed platform documentation, conducted client meetings, and delivered training on algorithm model training, management, and deployment for commercial clients.
- Collaborated with the commercialization team to successfully promote the commercialization of algorithmic tools.

Beijing Wodong Tianjun Information Technology Co., Ltd. (JD.com)   Beijing, China

Data Development Engineer, Merchant Data Department, Full-time   2018.07-2021.09
- Managed and maintained member data storage, monitored real-time membership levels and points calculations, and provided merchants with APIs for member inquiries and activity management in the Merchant Backend..
- Spearheaded the development, testing, and maintenance of the Shop Member Data Center.
- Collaborated with other teams to implement marketplace data governance measures to ensure data quality and integrity.

Internship Experience

Baidu.com Times Technology (Beijing)Co.,Ltd.   Beijing, China

R&D Engineer Intern, Homepage Business Department, Part-time   2016.12-2017.10
- Conducted querying, analysis, processing, and migration of foundational log data for new homepage users at Baidu.
- Collaborated with other development teams to work on backend development for the Baidu mobile app.

Honors & Awards

<u>Business Analytics</u>, Harvard Business School	2023.06.07
<u>Deep Learning with PyTorch: Generative Adversarial Network</u>, Coursera	2023.02.28
Best Newcomer Award for Big Data at NetEase Hangzhou Research Institute	2022.08
University of Washington **Machine Learning** Specialization, Coursera	2018.05.02
Merit student at Chinese Academy of Sciences University (Academic Year 2016-2017)	2017.06
Outstanding Graduates of Colleges and Universities in Hebei Province	2015.05
National Scholarship for Encouragement (Academic Year **2013-2014**)	2014.11
Merit student at Hebei Normal University (Academic Year 2013-2014)	2014.11
Second Prize in The First CUUG Cup Oracle Database Contest	2013.07
National Scholarship (Academic Year **2012-2013**)	2013.11.30
National Scholarship for Encouragement (Academic Year **2011-2012**)	2012.11.15
Merit student at Hebei Normal University (Academic Year 2012-2013)	2013.10.30
Excellent Student Cadre at Hebei Normal University (Academic Year 2012-1013)	2013.10.30
Merit student at Hebei Normal University (Academic Year 2011-2012)	2012.11.15

SKILLS

Computer Fundamentals: Computer Networking, Operating Systems, Data Structures and Algorithms.

Professional Skills:

- Machine & Deep Learning: GBDT, XGBoost, CNN, RNN, LSTM, GRU; PyTorch, Scikit-learn

- Natural Language Processing: Word2Vec, Attention mechanisms, Transformers

- Programming Languages: Java, PHP, Python

- Databases: Relational-MySQL NoSQL-Redis, ElasticSearch

- Tools: Linux, Git, Hadoop, Spark

Language Proficiency:

- Chinese: Mandarin Proficiency Test Certificate, Grade 2 A (89.1)

- English: IELTS 6.5 (Writing-6.0 Listening-6.5 Reading-7.0 Speaking-5.5)

Project Experience

Intelligent Instruction Recognition System: Inquiry Instruction Element Extraction - NetEase   2022.08-2023.02

- Led the design and development of modules for text data processing, augmentation, labeling, extraction, standardization, and online API services using Python.

- Enhanced and annotated text data, retrained the extraction model for fine-tuning to achieve optimal performance.

- Deployed the online API services on the NetEase Machine Learning Platform using Docker, conducted stress testing on the online inference service, optimized text extraction functionality, and compressed the model for faster API calls.

IDC Data Center Cooling AI Optimization for Energy Efficiency - NetEase   2022.04-2022.07

- Processed and analyzed E Zone data, focusing on a specific room, to optimize data center cooling efficiency.

- Trained various models, including Decision Tree, Random Forest, XGBoost, LightGBM, and NN models through AutoML, for predicting CLF (Cooling Load Factor).

- Deployed the online algorithm service on the Machine Learning Platform, resulting in a significant reduction of 0.02-0.03 in energy consumption for precision air conditioning.

Marketplace Data Governance - JD.com   2021.07-2021.12

- Developed and implemented data governance strategies for marketplace data management, task scheduling, and optimization of large-scale offline and real-time operations.
- Reduced marketplace storage usage by 18% through optimized file management and computing engine enhancements.
- Achieved a 7.3% cumulative reduction in daily memory resource usage and a 48.6% decrease in container count.
- Successfully decreased overall task count by 19.35%, improving operational efficiency.

Real-time Marketing: Membership Levels and Points Real-time Calculation - JD.com   2020.03-2020.06

- Integrated real-time computation for membership levels and points calculation alongside batch processing
- Conducted real-time processing and analysis of data streams utilizing Spark Streaming technology.
- Employed ElasticSearch (ES) and HBase versioning mechanisms for data consistency.

Prediction of Coupons for Shop Members - JD.com   2019.10-2019.12

- Partitioned dataset, performed feature extraction and selection.
- Trained GBDT, XGBoost, and Random Forest models, and ensemble them based on rank.
- Deployed the model in the merchant's backend for merchants to use in marketing activities.

Shop Membership Unlimited Business - JD.com   2018.11-2019.05

- Integrated member data, establishing connectivity between online and offline member data.
- Upgraded member data storage with a smooth migration and rollback plan for transferring the data to elastic databases.
- Designed a unified design scheme for member data sources, enabling heterogeneous systems to access member data through unified APIs by Java and distributing MQ messages to multiple systems.

Migration of Biglog Platform (New Homepage User Basic Log Migration) - Baidu   2017.06-2017.09

- Developed log splitting functions in Python, collaborated with Hive (HQL) and ETL technologies to process raw data.
- Implemented map and reduce functions on the Hadoop platform to insert processed data into the Unified Data Warehouse (UDW) table of the Baidu Bigdata Platform, enabling data presentation and analysis for the new homepage.

Integration and Development of Baidu App's Tieba and Q&A Modules - Baidu   2017.02-2017.05

- Utilized Python programming language and the AP MVC (Model-View-Controller) framework to deploy the Tieba and Q&A tab pages on a Linux server running Nginx, incorporating React Native (RN) for mobile platform development.
- Managed end-to-end development lifecycle, including development, testing, deployment, and disaster recovery data distribution, ensuring robustness and stability of the modules.

Chinese Academy of Sciences Information Technology Assessment Platform   2016.06-2016.10

- Developed a research information technology assessment platform using Java and the Spring framework on the China Science and Technology Cloud IaaS infrastructure.
- Specialized in designing the cache system module and successfully implemented a distributed cache system using Redis.
- Demonstrated, tested, and deployed the Web API in demo, dev, and production environments.

Hebei Normal University Supermarket E-commerce System   2014.12-2015.05

- Developed a small-scale e-commerce system including Front-end showcase system and Back-end management system, utilizing the ThinkPHP framework in LAMP environment, with deployment facilitated through Docker containers.

Integration of Hebei Normal University's Academic Management System   2014.03-2014.06

- Integrated Hebei Normal University's academic systems into a unified platform, allowing users to access all systems with a single login and eliminating the need for multiple logins.
- Utilized ThinkPHP in LAMP (Linux, Apache, MySQL, PHP) environment to connect with Oracle and MySQL databases, retrieving data and displaying it on web pages for the student center module.