WENJIA ZHANG

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EDUCATION

Columbia University in the City of New York NY, US
M.S. in Computer Science - Machine Learning Track Exp May 2024

- Core Courses: Natural Language Processing; Machine Learning; Deep Learning; Computer Vision; Artificial Intelligence; Database; Cloud Computing; Engineering Software-as-a-Service; Cryptography.

University of Electronic Science and Technology of China Sichuan, China
B.S. in Information Security Jun 2019

- Honor: 3rd Prize Scholarship.
- Core Courses: Data Structure and Algorithm; Computer Network; Operator System; Programming with C/C++.

TECHNICAL SKILLS & LANGUAGES

- Tech Skills: Python, Linux, C++, SQL, TensorFlow, PyTorch, Ruby, HTML, Testing, JavaScript, MongoDB, AWS, Google Cloud Platform, Distributed System, Microservice, Swift (studying).
- Languages: Chinese (native), English (proficient).

WORKING EXPERIENCE

China Mobile Communications Group Co.,Ltd. Anhui, China
System Support Engineer, Business Support Center Jul 2020 - Sep 2021

- Initiated the development of an e-commerce platform deployed on Alibaba Cloud utilizing a collaborative filtering recommendation algorithm, leading to a 1.8% monthly revenue boost via tailored cell phone plan suggestions.
- Championed the conception and execution of a customer acquisition tool, utilizing decision tree methodologies. Directed the initiative that resulted in a notable 6.7% reduction in customer acquisition costs for the 5G Plan within a three-month period.
- Managed customer accounts and databases (SQL and NoSQL) for over 1,000,000 users, configured maintenance plans, automated data monitoring, etc. within a 12-person team.

PROJECTS

Search Relevance Enhance and Iterative Set Expansion on Google Cloud Platform NY, US
Course Project Jan 2024 - Mar 2024

- Improved information retrieval accuracy on Google Cloud Computer Engine VM instance.
- Implemented a feedback system using the Rocchio algorithm, achieving over 90% accuracy after one iteration.
- Collaborated with one teammate to integrate SpaCy, SpanBERT, and Gemini to do data mining for a more intelligent search experience.

Image Captioning with Multi-Head Attention and Transformer NY, US
Course Project Oct 2023 - Dec 2023

- Developed an image captioning system using multi-head attention and Transformer architecture to improve the automatic generation of captions from images.
- This project leveraged the Flicker8k dataset and achieved a notable BLEU-4 score exceeding 60%.

Collaborative Development of a Second-Hand Marketplace NY, US
Course Project Oct 2023 - Dec 2023

- Led a 4-person team developing a second-hand marketplace platform. Implemented IaC to automate infrastructure provisioning and configuration using Terraform.
- Managed task allocation for frontend, backend, and testing phases (BDD and TDD).
- Designed user-centric features to enhance platform usability:
  - Users can either register and log in with a traditional account or seamlessly log in with their Google account.
  - Manage user profile with Google Maps API address validation.
  - Product creation with photos stored in S3, and title, price and descriptions stored in PostgreSQL on EC2.
  - Responsive interface deployed on S3 for optimal viewing across devices.
  - Product deactivation after purchase and buyer rating system with reviews displayed on seller profiles.
- Championed Cucumber and Respec testing with 100% coverage, and CI/CD to automate code testing.

Face Recognition Based on Convolutional Neural Network Sichuan, China
Undergraduate Thesis Mar 2019 - May 2019

- Constructed a dataset comprising over 5000 facial images captured within the school.
- Implemented a CNN model for facial recognition, achieving an accuracy improvement from 73% to 91% by applying a PCA algorithm to address face occlusions.

A File Transfer System Based on Hadoop Sichuan, China
Undergraduate Research Program Jul 2017 - Jun 2018

- Led a 3-person team to develop a file transfer system leveraging Hadoop Distributed File System in JAVA.
- This project involved analyzing the performance of Bzip2, Snappy, and Zstandard compression algorithms for file transfer, identifying the optimal algorithm for various scenarios based on transmission time efficiency.