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

- Led the development of a high-performing e-commerce platform on Alibaba Cloud. This platform utilized HTML/CSS/JavaScript/jQuery/Bootstrap for a user-friendly frontend, Python/Django for a robust and scalable backend, and a collaborative filtering recommendation algorithm that drove a 1.8% monthly revenue increase.
- Contributed to the development of a downloadable desktop tool that predicts potential 5G subscribers based on user-input data sheets. The tool utilizes decision trees and reduced 5G plan acquisition costs by 6.7% within three months. The user-friendly interface (HTML/CSS/JS) simplifies employee interaction.
- Leveraged MySQL to manage customer accounts and databases for over 1,000,000 users and implemented data visualization tools like Tableau 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.