# WENJIA ZHANG

Tel: +1-6468216047 Email: wz2647@columbia.edu LinkedIn: https://www.linkedin.com/in/wzhang0820/


## 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; AI; 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; Operating System; Programming with C/C++.

## TECHNICAL SKILLS & LANGUAGES

- Tech Skills: Python, Linux, C++, SQL, TensorFlow, PyTorch, Ruby on Rails, HTML, Testing, JavaScript, MongoDB, AWS, Google Cloud Platform, Distributed System, Microservice, Node.js, 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 China Mobile 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, and provided technical expertise for the sale of China Mobile Cloud products to enterprise customers.

## PROJECTS

**Advanced Analytics for Search Optimization and Predictive Modeling on GCP** NY, US

***Course Project*** Jan 2024 - Apr 2024

- Implemented a feedback system using Rocchio algorithm on GCP, 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.
- Collaborated to do data mining to identify key predictors of business closures in NYC, leveraging advanced analytics to drive strategic urban planning decisions.

**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.