

# Xiangjie Zhao



Male | Born on May 23, 1994 | E-mail: xjzhao777@163.com  
Hometown: Shandong, China | Personal Homepage: <https://cadenzhao.github.io>  
Current Residence: Beijing | Job Objective: Bioinformatics, Data Analysis

## Education

- **University of Chinese Academy of Sciences** Ph.D. in Bioinformatics Sep 2017 - Jun 2024
- **Fuzhou University** Bachelor in Bioengineering Sep 2013 - Jun 2017

## Research Experience

- Bioinformatic Integration Analysis of Human Hormone Receptors** (Project Leader) Feb 2023 – Present
  - **Responsibilities:** Project design, data collection including hormone receptor list curation, multi-omics data, disease data, drug target data, etc. Integrative bioinformatics analysis for human hormone receptors.
  - **Main Achievements:** Zhao X, Wang XJ. Integrated analysis of human hormone receptors. 2024. (In submission) Interactive website for human tissue hormone communication analysis (<https://hthc-123456789.shinyapps.io/HTHC>)
- Development of a Bioprinting System** (Project Participant) Jul 2022 – Oct 2022
  - **Responsibilities:** Assisted in the calibration and testing of the bio-3D printing robotic arm.
  - **Main Achievements:** Zhang Z, Wu C, Dai C, Shi Q, Fang G, Xie D, Zhao X, Liu YJ, Wang CCL, Wang XJ. A multi-axis robot-based bioprinting system supporting natural cell function preservation and cardiac tissue fabrication. *Bioact Mater.* 2022;18:138-150.
- Studying the Function of GCGR in Cerebellum using Bioinformatics and Experiment** (Project Leader) Nov 2020 – Present
  - **Responsibilities:** Participated in the design of the project, completed mouse behavior experiments, brain morphology and neuron morphology analysis, bulk RNA-seq and scRNA-seq data analysis of the cerebellum, manuscript writing.
  - **Main Achievements:** Zhao X, Zhang Z, Xie D, Wang XJ. Glucagon receptor in cerebellar neurons regulates body weight and locomotor activity. 2024. (In preparation)
- Analyzing Microenvironment and Drug Resistance of Myeloma Using scRNA-seq** (Project Leader). Feb 2020 - Jun 2021
  - **Responsibilities:** Designed and executed scRNA-seq data analysis, including cell clustering, cell annotation, cell cycle analysis, cell-cell communication analysis, trajectory inference, gene regulatory network analysis, visualization, etc.
  - **Main Achievements:** Zhao X, Liu Z, Wang XJ. Cancer stem cells induced by mesenchymal stem cells promote drug resistance in multiple myeloma. 2024. (In preparation)
- Clinical Big Data Analysis of Hypertension Patients** (Project Leader) May 2019 - Nov 2019
  - **Responsibilities:** Processed and analyzed large hypertension datasets using Python and parallel computing, focusing on data cleaning and visualization.
  - **Main Achievements:** Authored the report "Epidemiological Analysis of Hypertension Patients in Changzhou City" for the Health Commission of Changzhou City.

## Personal Strengths

- **Project Management:** Led multiple projects, adept in problem-solving, planning, and leadership, with a track record in scholarly writing.
- **Programming:** Expertise in Python, R, Shell for data analytics, algorithm development, and web development; proficient with Linux OS.
- **AI & Data Analysis:** Knowledgeable in machine learning/deep learning algorithms, adept at model construction and optimization with scikit-learn, PyTorch.
- **Omics Analytics:** Skilled in high-throughput sequencing analysis, including bulk RNA-seq, single-cell omics, spatial transcriptomics, CUT&Tag-seq, ChIP-seq, with strong visualization capabilities.
- **Biology:** Understanding of animal behavior, CNS, related diseases, metabolism, and cancer.
- **Communication:** Effectively presented at international conferences in both English and Chinese, with materials available on personal homepage.