# Xiaoxiao Qi

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## Professional Summary

Technical engineer in progammatic Ads optimization, machine learning, data engineering, statistical modeling, signal processing, computer vision and control theory. Holds a Ph.D. in Biomedical Engineering with a focus on Neuroimaging data resource development.

## Education

Illinois Institute of Technology *Chicago, IL,* Dec, 2020
Ph.D. in Biomedical Engineering *GPA: 3.9/4.0*

Huazhong University of Science and Technology *Wuhan, China*, Jun, 2014
B.Eng in Biomedical Engineering *GPA: 3.7/4.0*

## Experience

**Sr. Data Scientist, Ads Optimization, Epsilon, *Remote, Chicago, IL*** Apr 2022-Present

- Designed and worked on a machine learning system for ROAS optimization for programmatic campaigns.
- Designed, implemented and deployed a recommender system using ML for AI-guided Self-Service campaign management.
- Built and deployed a risk management system, improve the risk balance for multiple inventories, data centers by more than 40 % and applied the model for company-wide spending alert.
- Managed two summer interns and worked on bid volume prediction using machine learning and time series modeling projects using clustering and gaussian process modeling.

**Data Scientist, Ads Optimization, Epsilon, *Chicago, IL*** Jan 2021-Apr 2022

- Designed, built and deployed a bid budget allocation solution for campaign pacing optimization and reduced more than 3% cost for CTV campaigns and more than 10% cost for other types of inventories.
- Built and deployed an anomaly detection offline product using ML and DL for bid volume monitoring.
- Built and set up a Tableau dashboard for A/B testing monitoring. Conducted A/B testing for the new product.

## Research

**Development for Data Resources and Software for IIT Human Brain Atlas (v.5.0)**

- Developed probabilistic brain connectivity information data resource package using medical imaging and computer vision techniques.
- Data resources and software have had 8000+ downloads since release. Published the research results and resources to journal paper.

**Brain Tumor Imaging Auto-Segmentation with CNN**

- Built and Implemented data preprocessing pipeline of 3D MRI data using patches, improved data processing efficiency by 30%.
- Built a 3D U-net model (CNN) using multi-class soft dice as the loss function, trained and evaluated the model on the large dataset of patches.
- Applied this model for tumor auto-segmentation with an overall accuracy of 0.89.

## Skills

**Proficient**: Python, PostgreSQL, Linux, Machine Learning, TensorFlow, PyTorch, MLOps, Spark, PySpark, Optimization, Simulation, Statistical Modeling

**Familiar**: Docker, Hadoop, AWS, RNNs, GANs, CNNs, NLP, Control Theory, Hugging Face

**Basic**: Scala, Java, Matlab, HTML/CSS, Flask, GNN, Transformer, LLM