

# Andy (Xiangyu) Cui

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## EDUCATION

### Northeastern University

*M.S. in Artificial Intelligence of Khoury College*

Boston, MA

Dec 2023

### University of Nebraska-Lincoln

*B.S. in Computer Science of Arts Science College*

Lincoln, NE

May 2020

## PROFESSIONAL EXPERIENCE

### King 7 Club Corp

Jan. 2025-Present

*Senior Software Engineer*

*Los Angeles, CA*

- Developed and deployed a responsive website using **React** and **Node.js**, enhanced with **CSS 5** animations and hover effects for superior UI/UX, and implemented a local storage-based language toggle to efficiently switch between English and Chinese, reducing API latency and speeding up page loads. Ensured a consistent mobile interface with React's responsive design, maintaining uniform content and UI across all platforms.
- Integrated **Google Analytics** Reporting API to track website traffic and generate detailed reports, providing insights that helped design interactive dashboards for monitoring metrics such as page views and URL clicks, thereby facilitating data-driven strategies to boost social media engagement on platforms like TikTok, Red Book, and YouTube.
- Optimized global website performance by deploying through **AWS**, ensuring top access speeds with services including **CloudFront** for content delivery, **S3** for storage, **Route 53** for intelligent DNS routing, and Global Accelerator for optimized connectivity. Used **JSON** for data structuring to support scalable backend development and consistent data management.
- Automated tracking and reporting of web-driven social media engagement, increasing operational efficiency by **80%**, and organized common modules like navigation bars and footers into separate directories for better scalability and maintainability through modular design. Managed version control with **Git** and led **Agile** development processes, ensuring effective project execution and timely delivery.

### CAC Auto Group LLC

Feb. 2024-Dec. 2024

*Data Engineer*

*Southborough, MA*

- Developed and maintained a predictive pricing system for vehicles on CarGurus using **AWS serverless architecture**, optimizing market compatibility and operational efficiency. Utilized AWS services including S3, Lambda, DynamoDB, SNS, CloudWatch, and Kinesis for real-time data processing, Python and AWS **CloudFormation** for infrastructure.
- Implemented real-time monitoring with **AWS Kinesis** to track market data fluctuations, enabling automated detection and response to price deviations. Improved the accuracy of vehicle pricing on the company's website, resulting in an 80% boost in daily operational efficiency and over 50% improvement in real-time price adjustments compared to industry standards.
- Designed and deployed a **CRM** system on **Docker** using **WordPress**, ensuring the system's scalability and simplifying ongoing maintenance; Customized the CRM with essential features such as source tracking and lead status monitoring to enhance sales processes and improve visibility, saving significant time in monitoring sales conversion rates and successfully recovered 80% of potential sales leads, resulting in a notable increase in overall sales performance.

## PROJECTS

### Job Recommendation System Design

Jan 2025

- Developed a user interface for job searching using **Axure RP 10**; Applied content-based filtering using **TF-IDF** and cosine similarity, achieving 82% precision in matching user skills to job descriptions; Conducted **collaborative filtering** in **Python** with implicit user feedback, improving recommendation diversity by 18% via matrix factorization.
- Leveraged **deepseek API** to dynamically adjust recommendations based on real-time user feedback; Reduced cold-start bias by 30% through RL-driven exploration of niche roles.

### Stock Price Prediction with Deep Learning

Oct 2024

- Collected the historical stock price and other financial assets data on the company of interest; Conducted data preprocessing by applying min-max scaling in **Sklearn** to normalize stock price values, ensuring consistency across the dataset.
- Implemented **LSTM**, **GRU**, and **Transformer models** in **PyTorch**, optimizing hyperparameters (e.g., number of layers, optimization methods) through grid search, increasing model accuracy by 20%; Visualized opening and closing price trends to assess model performance in Python.

### Auto QA Chat Agent for Customer via NLP

Dec 2023

- Collected and cleaned large-scale Amazon customer Q&A datasets, ensuring high-quality data for effective AI model training; Developed a conversational AI agent in **PyTorch** leveraging state-of-the-art NLP models, including BERT and GPT2, fine-tuned for question answering (QA) tasks.
- Optimized hyperparameters for **BERT** and **GPT-2** to improve contextual understanding and response generation; Conducted 10-fold cross-validation for BERT and 5-fold for GPT-2, achieving average BLEU scores of 0.9 for BERT and 0.8 for GPT-2.
- Integrated continuous learning capabilities to adapt to evolving customer queries, improving long-term operational efficiency; Successfully automated 70% of routine customer inquiries, significantly reducing operational costs.