Andy (Xiang-Yu) Cui

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Education

Northeastern University Boston, MA, USA
M.S. in Artificial Intelligence of Khoury College Sept. 2021-Dec.2023

University of Nebraska-Lincoln Lincoln, NE, USA
B.S. in Computer Science of Arts Science College Sept. 2016-May. 2020

Skills

- Programing languages: Java, Python, JavaScript, HTML, CSS, C/C++, Assembly, VB
- Database: MySQL, PostgreSQL, MongoDB, Redis, SQLite, Hive
- Machine Learning: TF-IDF, Naïve Bayes, GPT-2, Bert, CNN, Transformer
- Framework/Libraries: Spring Boot, React.js, Node.js, jQuery
- Version Control & CI/CD: GitHub, TFS, Azure DevOps, Jenkins, Jira
- Others: AWS, Docker, Maven, Tomcat, Axure, Servlet, Junit, Nginx, LaTeX, CAD design, Tableau

Work Experience

AlpaLifeBio Inc | Internship Woburn, MA, USA
Software Engineer Dec. 2022- June 2023

- Executed data collection from biomedical public databases through **Python** and graphical **web scraping** tools, enhancing the dataset for advanced analysis.
- Applied NLP techniques for data comparison and matching, effectively identifying potential clients and contributing to targeted marketing strategies.
- Processed and analyzed over **50,000** data entries daily, utilizing graphical data representations to streamline reporting and significantly boost workflow efficiency.
- Consolidated existing datasets for integrated analysis and established a structured **SQL** database, implementing tag processing for improved search and retrieval operations.

Projects

Amazon QA robot trained by BERT & GPT-2 (NLP) Boston, MA, USA
Team Leader & Development Designer Sept. 2023-Dev. 2023

- Developed a Question Answering (QA) system using **GPT-2** and **BERT** models focused on Amazon product reviews, assessing their performance in natural language processing tasks.
- Applied advanced NLP techniques, including **TF-IDF** Vectorization, **CBOW**, and **Skip-gram**, for effective data preprocessing and analysis.
- Performed comprehensive model training and fine-tuning with a Kaggle dataset, utilizing accuracy, **LOSS** and **BLEU** score metrics for evaluation.
- Conducted **K-Fold** Cross-Validation and ablation studies to optimize model performance and robustness.

Employment Website Design by Axure (HCI) Boston, MA, USA
Development Designer Sept. 2023-Dev. 2023

- Orchestrated the design of an Employment Website tailored for co-op opportunities, meticulously realized through the principles of **Human-Computer Interaction (HCI)** and ensuring an intuitive user experience that aligns with non-technical user habits for widespread acceptance.
- Applied **CRAP design** principles to create a visually cohesive and navigable interface, addressing existing website pain points by incorporating critical features such as visa type and field of work.
- Championed a cohesive UI design philosophy across the platform, securing a seamless and inclusive user experience that appeals to a diverse audience. The design's efficacy and user satisfaction were substantiated through extensive usability testing, confirming that the interface meets high standards of effectiveness and user gratification.

Robot Shop Database (SQL) Boston, MA, USA
Team Leader & Development Designer Jan. 2023-May. 2023

- Developed a **Python** and **MySQL-based** Robot Store Management System to streamline operations for small supermarkets, featured in a terminal user interface.
- Implemented **SQL** database structures and **Python-MySQL** connections, enabling efficient user account, order, and refund management.
- Constructed and documented a secure, offline management system, accommodating customer and operator interactions with potential for web expansion using **Django**.
- Managed project version control with **Anaconda** and maintained code repository on **GitHub**, with comprehensive end-user documentation and test cases.