Mengting AI

Phone: 4479021710
Email: mai10@illinois.edu
Home Page: https://famous-blue-raincoat.github.io/mengtingai/home

EDUCATION

University of Illinois at Urbana-Champaign (UIUC)   Aug 2022 – Dec 2023
Master of Computer Science
- GPA: 3.7/4.0

Xi'an Jiaotong University (XJTU)   Sep 2018 – Jul 2022
BE in Computer Science
- GPA: 3.6/4.0; Average score: 86.4/100

RESEARCH EXPERIENCE

Model Compression Methods for Transformer, UIUC   Sep 2023 – Present
Graduate Research Intern, Advisor: Jingrui He
- Investigate methods for compressing Transformer-based Large Language Models.
- Emphasize optimization during the inference stage.

Thesis: Method for Detecting Inappropriate Language in News, XJTU   Sep 2021 – Jun 2022
Advisor: Minnan Luo
- Surveyed methods to detect irregularities in news articles.
- Collected data using Python to crawl news articles from school's news websites.
- Leveraged BERT, XGBoost, Levenshtein, and N-gram to build the model, which proved to detect over 90% of inappropriate language in news articles.

Fake News Challenge Project, Massachusetts Institute of Technology   Jul 2020 – Oct 2020
Team Leader, Advisor: Di Jin
- Mastered fundamental models in NLP, such as CNN, RNN, and LSTM.
- Applied the NLP skills in fake news detection and used Pytorch to compile germane codes.
- Employed the ensemble model of CNN and Gradient Boost Tree to obtain a final result 13% higher than the baseline.

Question Decomposition in the Q&A System, XJTU   Jun 2020 – Jul 2020
Student Researcher, Advisor: Shuo Zhang
- Researched ways to question decomposition.
- Proposed methods that decompose the complex problem into a network of sub-graphs, then answer them separately.

WORK EXPERIENCE

UIUC Prairie Research Institute   Jul 2023 – Present
Software Engineer Intern
- Develop an interactive online map website that calculates and displays the stream flow area information that pops up from a clickable target point on the map.
- Implement the website using HTML + CSS + JavaScript + Leaflet + Node.js + ArcGIS Pro API.

TE Connectivity (Automotive China General Manager Office)   Jun 2022 – Mar 2023
Digital Intern
- Developed a RESTful data processing interface using FastAPI and requests, which can be accessed to implement CRUD operation on the backend MySQL and MongoDB database deployed on the a cloud based aPaaS.
- Used docker to deploy the low-code development platform Mingdao Cloud on AWS EC2 and integrate my python package into the platform backend for invocation through modifying the mount directory. Used Nginx to do load balance and implement reverse proxy.
- Developed Restful style backend interfaces to extract and manipulate data by automatically generating SQL statements, significantly reducing company costs.
- Researched AI-related new techniques like ChatGPT and introduced them to the digital team.

Institute of Software Chinese Academy of Sciences Oct 2021 – Jan 2022

NLP Algorithm Intern
- Utilized DAPT-BERT to produce a Q&A system on cybersecurity.
- Deployed Python to crawl security-related questions on StackOverflow; constructed a similar question training dataset as per the set of gathered questions, with the aid of the Bert semantic computation.
- Used DAPT-BERT to formulate a binary classifier underpinned on the training dataset; actuated an accuracy of 92% in the final models at DAPT100k.

Baidu (The largest search engine company in China) Feb 2021 – Aug 2021

NLP Algorithm Research Intern
- In the text-classification module, deployed Word2Vec to conduct feature extraction and vector coding; innovated a text multi-classifier via 3-layer deep XGBoost; achieved a final f1score around 93%.
- Adopted keyword extraction to form a tag pool of employees' industry experience; applied pyspark to amass the word separation data into 4-grams; applied TF-IDF to take TOP 500 and expand the initial tag pool, which ultimately increased the tag coverage from 50% to 80%.
- Exercised BERT to heighten the utility of the hard skill tags; encoded the initial version of hard skill tagging with Bert-as-Service; improved the quality of the labels after several rounds of iterations until convergence.

SKILLS

Languages English, Mandarin Chinese
Programming Machine Learning, Natural Language Processing, Pytorch, LaTeX, C/C++, Python, Java, MatLab, HTML, CSS, JavaScript, PHP, MySQL, Linux, AWS

SELECTED PROJECTS

Farmer's Market Order System Oct 2022 – Nov 2022
- Developed a Farmer's Market Order website that implemented Order Browse, Adds to Cart, Order Place, and View Order History on the user's side. Provided CRUD operation for the products on the farmer's side.
- Built the front-end page by using HTML + CSS + JavaScript.
- Built the back-end service by using MySQL + Java Springboot + JDBC + MyBatis.

Web Chatroom Application Apr 2022 – May 2022
- Developed a Web Chatroom that implemented Log in/Sign in, Group Chat, and File Upload functions.
- Built the front-end page by using HTML + CSS + JavaScript + iFrame.
- Built the back-end service by using Node.js + PHP + MySQL + Express + SocketIO.

AWARDS

2021 Outstanding Student (top 15%), XJTU	Oct 2021
Third-class Scholarship (top 20%), XJTU	Oct 2020 & 2021
2nd Place, KPMG × Yiyou Youth Center STEM is HER Future (2/48)	Aug 2021