Hengchao(Derrick) Wang

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EDUCATION

Master of Science in Computer Science, The University of Texas at Arlington, **GPA: 3.9/4.0** **Aug,2019-Aug,2020**
Master of Eng. in Software Engineering, Beijing University of Posts and Telecommunications, **GPA:3.5/4.0** **Sep,2017- Jun,2020**

INTERNSHIP

China Telecom Beijing Research Institute **Aug,2018-May,2019**

-Algorithm developer and Software engineer interned (The research institute under china telecom).
-Implemented Named Entity Recognition (NER) Algorithm development. Analysis of the police record data get crime name, address, and some other information. Using **LSTM** network to Determine entity's boundaries and **CRF** to get the Category of entity.
-Implemented Graph Storage and Clustering Algorithms development. To analyze, storage and cluster the entity after NER algorithm analysis. Implement **Force Atlas, Spectral clustering** and Visualization by **Gephi**. Using **Python,** and **Neo4j** database**.**
-Catalog Classification of News. Using google bert_zh_L-12 and WikiText103 pretraining language model and design our RNN model. Based on **ULMFIT** model, **Transfer Learning** method.
-Using **Python, Java, Flask** and **TensorFlow**.

Beijing Judao Youda Network Technology Co, Ltd. **May,2018-May,2019**

-Lecturer interned in one of the biggest internet educational institutions teaching computer technology.
-Participated in the company's curriculum design. Developed the teaching plan and content from the customer's perspective.
-Taught Informatics courses (Algorithm and Basic syntax format). Communicated often with parents and students.
-Taught data structure and Algorithm for high school students, using **C++** language.

PERSONAL PROJECTS

ServeMe System **Fab,2020-May,2020**

-A course project in Adv Tops Software Engineering course in UT-Arlington. Designed a Home Services system, have making new request, bidding and order management functions.
-Had two characters: customer (search and place service request) and services provider (place bid for request and provide service).
-Followed the scrum method (Agile development spirit). Had regular standing meetings and finished each sprint for two weeks.
-Using **Spring-boot** as back-end, **Java** language, **REST** API. Using **Heroku** as an auto-deployment tool, **Lombok, JPA** Plugin. Using **firebase** to verify authorization and store avatar.
-Using **Ionic** (Cross-platform, based on **Angular**) as front-end framework (Cross-platform) implement android client, and ios client, using **TypeScript** language.
-My job was mainly using Ionic framework design the front-end (HTTP request and service) and design the back-end program.

News Management System **Sep,2019-Dec,2019**

-A course project in Software Engineering in UT-Arlington. Designed a News Management System.
-Defined two kinds of user with two authority including manager and user.
-Developed functions such as add or delete news, comment news, manage users and news classification, also access news API.
-Implemented back-end of the system by using **Spring-boot, Java,** and **MySQL** database technologies.
-Implemented front-end of the system by using **Angular** framework.
-My job is mainly using Sprint-Boot and MySQL to build back-end and using **Angular** framework to build front-end.

Instant Messaging System **Sep,2017-Jun,2018**

-Laboratory project, an Instant Messaging Software for companies. IM instant messaging software Android client and background development. -
-Achieve P2P chat function, group chat function, chat history and put the product online.
-The system includes service servers, router servers and clients.
-Using **SpringBoot** to build each component. Using **Netty** to build the underlying communication. **Redis** stores routing information, account information, and online status of each client. **Zookeeper** is used for registration and discovery of IM-server.
-My Job is design and implement the backend of system, and design android client.

Battery fault diagnosis project based on NASA data **May,2018-Jul,2019**

-Laboratory project. Analysis battery loss curves and predict whether aging. Based on battery aging data.
-Using **TensorFlow** and **Sklearn** libraries, designed Naive Bayes model as baseline, designed **RNN-LSTM** model and XGboost model.
-The initial datasets were from NASA laboratory 18600 battery aging datasets. Also imported the data from China Electric Vehicle Association. Using these battery aging data to train the model.
-Finished model and got more than 95% accuracy. Complete project review.
-National College New Energy Vehicle Big Data Application Innovation Competition. Get the top 25 of the innovation group.

SKILLS

Languages: Java (leetcode 300+ using Java), Python, SQL, TypeScript (not proficient).

Tools and Tech: Flask, Spring-boot, Redis, Git, Maven, Heroku, REST, Google Cloud (Compute Engine and Firebase), IBM cloud, AWS.

Platforms: Windows, Ubuntu, MacOS, Android (Ionic Cross platfrom).

AWARDS AND VOLUNTEER EXPERIENCES

Awards: Postgraduate Academic Scholarship three times, Undergraduate scholarship twice, National College New Energy Vehicle Big Data Application Innovation Competition top 25. Internet plus Innovation and Entrepreneurship Competition Provincial Silver Award.
Volunteer Experiences: UTA Chinese Class Volunteer, IBCA Church Volunteer