Zhihong Guo

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EDUCATION

Concordia University, *BCompSc in Computer Science* Sep 2016 | Jun 2019
Montreal,QC,Canada

Swansea University, *BEng in Civil Engineering* Sep 2011 | Apr 2014
Swansea,Wales

SKILLS

Programming Languages: Java, C++, JavaScript, HTML, SQL, C, CSS
Frameworks: Spring MVC, Spring boot, React JS
Tools: Git, GitHub, MySQL, Maven, Hibernate, Redux
Others: SOLIDWORKS, ANSYS, AutoCAD

PROJECTS

TCP (Transmission Control Protocol) Data Transmission Application, *Java Socket API, RESTful API, Multiple Threads*
Built a local server to receive and handle GET/POST requests and simulated multiple clients to send HTTP requests and get responses from server side. Implemented this application with Java Socket API directly, created own cURL commands.
https://github.com/GuoZhihong/TCP-Transmission-Control-Protocol-Data-Transmission-Application

UDP (User Datagram Protocol) Data Transmission Application, *Java Socket API, RESTful API, Multiple Threads*
Replaced TCP with UDP and satisfied Data Integrity(simulated TCP three-way handshaking technique, drop rate and delay) as same as TCP.
https://github.com/GuoZhihong/UDP-Server-Client-Application

Auto Language Identification Application, *Java, Natural Language Processing (NLP)*
Built an application that can distinguish a sentence's language by training language models with large data sets. Trained a unigram,bigram and trigram character-based language model for each language and using language models to identify the most probable language of a sentence given as input.
https://github.com/GuoZhihong/Automatic-Language-Identification

Puzzle Solver, *Java, Heuristic Search*
A project uses A*, DFS(Depth First Search) and BFS(Breadth First Search) algorithms to solve a 11-d misplaced puzzle by moving a tile once at a time until all tiles are correctly placed. Compared the search time and path differences between 3 different algorithms.
https://github.com/GuoZhihong/Puzzle-Solver

Small World Board Game, *C++, Design Pattern*
It is a game about two players select races and conquer lands, each race has a special power and each land worths a few coins, whoever earns more coins would win the game. Implemented this game with basic game logics, map loading ,game exceptions etc. Implemented Observer, Strategy and Decorator design patterns to structure the coding.
https://github.com/GuoZhihong/SMALL_WORLD

AWARDS

Upper Second-Class Honours Degree, *Swansea University* July 2014