Zisheng Cai

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Education

Brandeis University   08/2022 – 05/2024
M.S. in Computer Science
GPA: 3.75/4, Courses: Java programming, Data Structures, Machine Learning

Dalian University of Technology   09/2018 – 06/2022
B.E. in Environmental and Ecological Engineering
GPA: 86.9/100 (top 20%), The Second Prize Scholarship

Skills

Programming Language: Python, C/C++, Java, HTML/CSS, JavaScript
Technologies: Git, Bash, Bootstrap, MySQL, MongoDB, jQuery, RESTful, Node.js, React.js

Experience

XPeng Motors   12/2021 – 05/2022
Data Analyst Intern, Autonomous Driving Center
· Analyzed over 10 million pieces of automatic parking data and implemented data visualization to find the performances of the algorithm in over 10 different situations
· Optimized the structure of one database about the parking algorithm using NoSQL and reduced at least 20% running time when searching data
· Modeled the data with several statistical methods in 2 unique ways, reported results, and make recommendations to improve the algorithm

Projects

Personal Blog Website
· Designed the user interfaces using HTML5, CSS, Bootstrap, JavaScript, jQuery
· Built the RESTful APIs by object-oriented code in Node.js to implement CRUD operations on MongoDB database
· Developed the React Router DOM to allow nested RESTful routing

TCP/IP Protocol
· Created a simple TCP/IP protocol in C++ on a Linux operation system
· Using 3 data structures to maintain the TCP byte streams and achieve the TCP connection

Cancer Detection
· Devised a convolutional neural network(CNN) image classification system to detect cancer in over 0.2 million pathology images with Tensorflow and Keras
· Reduced overfitting by using dropout layers and improved accuracy from 80% to about 90% by parameter optimization
· Constructed a React app as front-end and flask in Python as back-end.