JIYANBO CAO

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Objective

Seeking for full time entry-level, internship or CO-OP position of development role in any software development or machine learning department where I can utilize my skills and experience to contribute to the department.

Summary and Skills

- Clear understanding of basic Machine Learning algorithms, such as Linear Regression, Decision Tree, etc.
- Familiar with assembly language and disassembly. Had use disassembly technique to develop an injected program on a private game server.
- Skilled in WinDbg and OllyDbg.
- Good knowledge of C/C++ 11, STL library, Boost library
- Comprehended C++ design patterns: Singleton pattern, Factory pattern, Abstract factory pattern, Observer pattern.
- Fluent in SQL, MySQL, SQLite commands
- Completed coursework in Natural language processing, Computer vision, Computer security, Smart health.
- Used Convolution Neural Networks, Long-short term memory and complex neural network architectures in projects. Completed assignments and projects using Python based machine learning platforms and other related libraries.
- Fluent in Python, PyTorch, TensorFlow machine learning platform and other related libraries
- Issue identification and resolution
- Defining requirements
- Fast learner

Co-op and School projects

Development Intern | Antiy Labs |07/2018 - 09/2018

- Accomplished a scrip with automatic download feature which obtain files from assigned FTP service for the purpose of further analyze.
- Analyzed downloaded files which contain enormous website's WHOIS information and only extract the URLs.
- Programmed that campares the URLs extracted from existing one and new one, then conclude with which URLs are new and which are canceled.

School Project 1- QT CHAT ROOM

- Structured an Asynchronous server using C++ 11, Boost library, and Asio network communication architecture, included client end and server end.
- Using lock mechanism to ensure threads safety. Applied tcp_message function to receive package and tcp_session to create connect sessions, also include a threads pool to manage multiple threads.
- Provided login function, password and username check linked with SQL server.
- Using QT created a chat room with simple UI, also used Boost library Asynchronous network framework. Similar server above. It is a cross platform application using C++ 11 featured smart pointer to generate objects. The main idea is to create a Sender, a Trigger, a receiver, and response function.

School project 2 – Machine learning related

- Completed housing price prediction using CNN architecture with Python and Keras. Used attributes such as housing median age, total rooms, population, etc. to learn the pattern of housing price in California.
- Completed project of Sentiment analysis using Keras platform. Utilize TF-IDF feature extraction and different model such as Long-short term memory, BiLSTM and CNN to train the dataset.
- Complete Image classification of CT scans for Head, Chest and Abdomen using CNN for feature extraction and KNN and RF for classification.
- Research on boost performance of tabular data processing using deconvolution combined convolution networks.

Education

Lakehead University | Thunder Bay, ON | 09/2019-05/2021
Master of Science: Computer Science

Heilongjiang University | Harbin, Heilongjiang, China | 09/2015-06/2019
Bachelor of Engineering: Network Engineering

Websites

GitHub: https://github.com/AooRobot, include project 1 and 2.