Tianle Wang

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PROFESSIONAL EXPERIENCE

Selected Project Experience

- UTodo (Django REST, React, Postgresql)
  - Developed a full-stack web application using Django REST for the backend and React for the frontend.
  - Designed Django models, serializers, and views to create a RESTful API for CRUD operations.
  - Integrated token-based authentication for secure communication between frontend and backend.
  - Utilized Material-UI for the frontend interface design, ensuring a clean and responsive user experience.
  - Deployed the frontend on GitHub Pages and the backend on Heroku.
- UTLeetcoder (React, JSON)
  - A platform to track users' Leetcode statistics. Currently managing and serving over 30 users.
  - Developed the frontend using React and Ant Design UI Library for an intuitive and user-friendly interface
  - Handle post requests to Leetcode's GraphQL interface, retrieve and serialize user data by Node.js.
  - Hosted on GitHub, deploying it to GitHub Pages, and utilized GitHub Actions to trigger backend updates.
- WechatBot (Typescript)
  - Developed a WeChat bot using TypeScript, powered by the Wechaty framework.
  - Integrated the bot with UTLeetcoder, allowing it to fetch and display data from the UTLeetcoder.
- Analysis of BERT and LSTM Based Models on Multi-label Coding Questions Classification
  - Built two models based on BERT and LSTM with PyTorch and TensorFlow frameworks.
  - Conducted special fine-tuning techniques to optimize model performance and achieve high accuracy.
  - Performed comprehensive analysis, evaluation, and comparison of the performance of BERT and LSTM.
  - Demonstrated through analysis that BERT outperforms LSTM and achieves higher accuracy in some tasks.
- Web Server (Socket Programming, C)
  - Implemented a simple CGI program by C with Linux System Call.
  - Deployed a local server using sockets and utilized sockets as clients for each request sent to the server.
  - Utilized the select and pipe to process multiple socket I/O requests in a single thread simultaneously.
- Pokémon-like Word Game (Java)
  - Developed the game following the design concept of clean architecture and the principles of SOLID.
  - Utilized design patterns, such as Momento to implement Save/Load functionality.
  - Implemented the game's functionality using the Gson module to save and read game data.
  - Expanded the game's interface beyond the command line by utilizing the Swing module to create a GUI.

EDUCATION

UNIVERSITY OF TORONTO **Toronto, ON**

Honors Bachelor of Science **Sep 2020 - June 2023**

Relevant Courses: Software Design, Software Tools and System Programming, Data Structure and Algorithm, Computer Organization, Methods for Machine Learning, Stochastic Processes, Time Series Analysis, etc.

ADDITIONAL INFORMATION

- Technical Skills: Python, C/C++, Javascript/T, R, Java, HTML, CSS, SQL
- Libraries: React, Django (REST), PyTorch, Matplotlib, NumPy, Scikit-learn, etc.
- Development Tools: Vscode, Pycharm, Vim/Neovim, R-Studio, Intellij
- Miscellaneous: Shell (Bash), LaTeX, Markdown/RMarkdown, Git