YUFAN TANG

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Self-Evaluation

My most prominent advantage is that I can quickly locate and solve code problems that arise in projects. At the same time, I have strong learning ability and can start a new project very quickly.

Education

Delft University of Technology   **Sep. 2022 – Aug. 2024 (e)**
Master of Science in Computer Science, GPA: 7.5   *Delft, The Netherlands*

Nanjing University of Aeronautics and Astronautics   **Sep. 2018 – Jun. 2022**
Bachelor of Science in Computer Science, GPA: 4.0/5.0   *Nanjing, Jiangsu, China*

University of Edinburgh   **Sep. 2020 – Dec. 2020**
Exchange student of Informatics   *Edinburgh, United Kingdom*

Experience

Alibaba Cloud Computing Co. Ltd.   **Jul. 2021 - Sept. 2021**
Database optimization - Java Intern Engineer   *Hangzhou, Zhejiang, China*

- Participated in the company's related sales ecological management business, assisted in developing an incentive mobile app for the sales team, increased the sense of policy participation among sales staff, and ensured the implementation of policies to guarantee stable sales growth of the company.
- Developed the back-end of a monitoring and alarm platform called "Xdata" to address challenges in managing a globally complex infrastructure with diverse business domains and applications. The platform integrates logging frameworks, collects and visualizes application metrics, and provides an overview of business domains. The project involved **designing databases**, resolving issues like "**lack of metric connections**" and "**redundancy in pointer table records**".

Projects

Cloud-Based High-Concurrency Solution for E-commerce | *Python*   **Apr. 2023 – Jun. 2023**

- Designed stock, payment, and order services using the Flask framework of Python and **CockroachDB**.
- Achieved **100% consistency**. When simulating with 1000 users, the solution demonstrates about **89%** success rate.
- Took charge of writing and testing the deployment script for local Kubernetes.
- Led the development of the payment service and the integration part of the entire services.

Indoor Localization Android App | *Java, Android*   **Apr. 2023 – Jun. 2023**

- Applied the **k-nearest neighbors**, **Bayesian localization**, and **particle filter** algorithms to indoor positioning.For the k-nearest neighbors algorithm, an accuracy of **73.75%** was achieved when k was set to 3.
- For the Bayesian localization algorithm, 50 training samples were collected for each cell, resulting in an accuracy of **91.67%** on the test data. The particle filter algorithm demonstrated convergence and achieved **nearly 100%** accuracy when the parameters were set appropriately.
- Utilized accelerometer data from a smartphone to identify the user's current activities, which included jumping and walking. Achieved an accuracy rate of **98.82%** in the activity detection task.

Text-to-SQL research and implementation | *Python, Pytorch, Tensorflow*   **Dec. 2021 - May 2022**

- Simplified the Text-to-SQL task by leveraging **seq2seq** machine translation models. Utilized open-source tools like transformers and fairseq for model training and parameter adjustment.
- Enhanced the "RYANSQL" model (a Text-to-SQL model) originally designed for English Text-to-SQL datasets, **extending its application to Chinese datasets** for experimental testing.
- Applied template matching method "GAZP" and machine translation method to open-source Chinese Text-to-SQL datasets. Implemented **data augmentation** to enhance the generalization ability of the model and evaluated the predictive accuracy of the Text-to-SQL model.

Technical Skills

Languages: Java, Python, C++
Developer Tools: VS Code, PyCharm, Vim
Technologies/Frameworks: SpringBoot, Flask, Vue.js