Hao ZHENG

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GitHub: *https://github.com/zhengyph* | Portfolio: *https://zhengh.ml* | LinkedIn: *www.linkedin.com/in/zhengph*

Summary of Qualifications

- Competent Computer Science graduate with solid programming knowledge and proven research experiences in delivering robust and scalable back-end **software development**. Demonstrated an impeccable understanding of the **Object-Oriented Programming (OOP – Java), SDLC, and design patterns**.
- Advanced knowledge of SQL/NoSQL database architecture, schema design, database standards & procedures; familiar with performance tuning, query optimization, stored procedures, user functions, and database triggers.
- **Skills Highlight**: Agile Development, Database Development, RDBMS, scalability & performance optimization, User Requirements Gathering, Testing & QA (Unit Testing, Integration Testing, Performance Testing).
- Exceptional time management skills with a willingness to resolve urgent application issues outside of business hours.

Technical Proficiency

- **Programming & Tools:** Java8/11, Python3.8, SQL, C, JavaScript, HTML5, CSS3, JSON, API & Frameworks (JavaEE, JDBC, JPA, Junit4/5, Mockito); Android SDK, JetBrains, Visio Studio Code; Databases (MySQL, H2, HSQLDB, PostgreSQL, MongoDB), Version control (Git, CVS, SVN).
- **Operating Systems:** Linux, Mac OS, Windows.

Education

BACHELOR OF COMPUTER SCIENCE | UNIVERSITY OF MANITOBA | 2018.09 – 2021.10

- Data Structure & Algorithms, Databases Implementation, Object-oriented Programming (OOP), Data Mining, Operating Systems, Distributed Computing, Software Engineering, Discrete Mathematics.
- Recipient of Undergraduate Student Research Awards (USRA 2020 & 2021).

Professional Experiences

JAVA DEVELOPER INTERN, DANACONNECT   2022.08 – 2022.11

- Constructed messaging system using Jakarta EE and Payara to perform message exchanging between server and client ends; built web service interface using JavaScript and HTML5.
- Removed incorrect and unnecessary code segments in source codes, rewrite documents and persistence tests using H2 database, JPA and Junit 5/Mockito.
- Deployed H2 database with JDBC, Junit 5/Mockito to perform unit tests for JavaEE based project.

DATABASE DEVELOPER (RESEARCH ASSISTANT), UNIVERSITY OF MANITOBA   2020.05 – 2021.08

Research Topics & Publications: https://ieeexplore.ieee.org/author/37088804025

- Leveraged data mining and advanced analytics methodologies to support 7 research on topics ranging from labour market changes during COVID-19, smart city transportation, etc.
- Deployed MySQL database with JDBC and ensuring stability, reliability, and performance; built and maintained database schemas, tables, views, and stored procedures.
- Built data pipeline and ETL process to retrieve data from third-party platforms, familiar with data formats - CSV, JSON.
- Performed importing, exporting, pre-processing, calculating and summarizing information on various data sets, and designed various scripts to verify the accuracy of results.

Project Experiences

PERSONAL BUDGET-BALANCING SYSTEM (PBBS) | ANDROID

- Developed an Android Personal Finance mobile application with Java in Android Studio, enabling the management of personal finance, budgeting, transaction tracking, bank account syncing, and new user stories.
- Applied version control software (Git) to track, test, and update pre-existing source code.
- Constructed database using HSQLDB for Business and Persistence layers, with safe and controllable access, and straightforward interfaces and interactive activities.
- Performed clean coding in a 5-layer architecture including Application, Business, Objects, Persistence, and Presentation layers, followed by unit, integration, and acceptance tests through implementing Junit/Mockito test frameworks.