

Renchen Sun

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JUNIOR PROGRAMMER & GIS ANALYST

with extensive knowledge of DBMS & GIS with a strong foundation of computer science

Summary

A self-motivated student with excellent academic records (3.92 / 4.00 GPA), relevant 2 years programming experience in C, C++ with 10 projects on [Github](#), and 1 year experience in Database Management System.

Area of expertise:

- Programming: C++, C
- Database design: SQL, ERD, Oracle 11g, Oracle Data Modeler, IBM DB2
- GIS analysis: ArcMap, ArcCatalog, ArcScene, FME
- Web design: HTML, CSS, Javascript, PHP
- Operating system: Unix, Linux, Windows

Qualification

- Strong programming skills in C, C++
- Proficient in SQL & GIS tools
- In-depth knowledge of DBMS, and GIS technologies
- Intermediate web design skills in HTML, CSS, Javascript, and PHP
- Intermediate knowledge of data structures, algorithm
- Quick and passionate learner, eager to face challenges and improve skills
- Excellent verbal and written communication skills
- Highly reliable self-motivated starter

Education

University of Waterloo

Bachelor of Geomatics with Computer Science Minor ---- 2012 - 2014 (Expected)

Grade: 3.92 out of 4.00 GPA

Honor: Dean's Honor List (Received on May 2013)

China University of Geosciences (Wuhan)

Bachelor of Computer Science ---- 2010 - 2014 (Expected)

Honor: National Scholarship (Top 1%) (Received on December 2011)

Project

Spatial Database for features on the campus of University of Waterloo -->

Geospatial database

Extract, transform, and load raw CAD data from campus to ArcObjects by using FME.

Fix topology errors either by fixing topology or by manually digitizing objects. Create geospatial database in ArcMap. Create spatial indexes for querying information. Create Metadata for spatial database.

Applied Techniques:

- > ArcCatalog, ArcMap, Spatial Database, FME, Oracle 11g, SQL, Cartography

Digital Camera Purchasing System --> Commercial database

Model each entity with attributes and relationships between each other. Use Oracle 11g for database construction. Insert data and query information by employing SQL.

Applied Techniques:

Experience

- Oracle Data Modeler, Oracle SQL developer, SQL, EERD

Transportation Analysis for Travellers in Vancouver --> Analysis for supporting decision-making

Use open data from Vancouver to evaluate transport stations accessibility in terms of travelling cost, distance, and nearby landmarks. Refine and transform data by utilizing FME. Use Oracle spatial and SQL for creating spatial index and querying information to support decision-making.

Applied Techniques:

- Oracle Spatial, SQL, ArcMap, ArcCatalog, FME, Spatial Database, Cartography

The Game of Quadris --> C++ video game

Analyze software specifications. Employ UML for modelling classes and relationships. Apply design patterns to avoid redundant work. Utilize Xwindow for graphical display.

Applied Techniques:

- C++, Observer Pattern, Singleton Pattern, Decorator Pattern, UML, Xwindow

Personal Website --> Web design

Link: csclub.uwaterloo.ca/~r26sun

Applied Techniques:

- HTML, CSS, JavaScript, PHP

Fall 2013 Environment Ambassador, University of Waterloo

September 2013 - Present | Waterloo, Ontario

- Responsible for introducing Geomatics to those students who are interested in applying
- Responsible for guiding and assisting students in terms of their future major selection
- Responsible for taking visitors for building tour at University of Waterloo

Human Computer Interaction (HCI) of whole-body computer interface (Volunteer)

August 2013 | University of Waterloo

- Cooperatively finished all tasks of body movements to interact with computer
- Completely reported all issues during the research including positiveness and negativeness

Data structure Teaching Assistant, China University of Geosciences

June 2012 – July 2012 (2 months) | Wuhan, Hubei, China

- Successfully helped many students debug their program and figure out potential bugs in their programs
- Comprehensively explained linked list, graph theories, trees, sorting algorithms for many students

Director of Publicity Department of Faculty of Computer Science, China University of Geosciences

August 2011 - June 2012 (11 months) | Wuhan, Hubei, China

- Events organizer, responsible for promoting contests of Web Design, Flash, ACM, etc.