

Renchen Sun

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JUNIOR PROGRAMMER & GIS ANALYST

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

SUMMARY

Prominent Geomatics student with excellent academic records (3.92/4.00 GPA), 1 year experience of GIS analysis, relevant 2 years programming experience in C, C++ with 10 projects on [Github](https://github.com), and 1 year experience in Database Management System.

Area of technical expertise:

- GIS software: Quantum GIS, PostgreSQL, ArcMap, ArcCatalog, ArcScene, FME, ENVI
- Database design: SQL, Oracle 11g, Oracle Data Modeler, ERD, IBM DB2
- Programming : C/C++, Java, Python, XML, Android
- Web Design: HTML, CSS, Javascript

EDUCATION

University of Waterloo

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

Grade: 3.92 out of 4.00 GPA

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

China University of Geosciences (WUHAN)

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

Grade: 91% Accumulative

- National Scholarship (Top 1%) (Received on December 2011)

PROJECTS

toDue - Android App

- Developed using Java under Unix platform using Android Framework
- Designed User Interface and applied GUI components in the application
- Help users list their tasks/assignments/works and their priorities and due dates

Applied Techniques:

- Java, Android Development, GUI Design

The Game of Quadris - C++ video game

- Comprised 3000 lines of code
- Developed using C++ under Linux platform using X windows
- Applied five design patterns (Observer, Singleton, Decorator, Factory, Template)
- Used UML, Use Case Diagram, Data Flow Diagram to model the system

Applied Techniques:

- Observer Pattern, Singleton Pattern, Decorator Pattern, Factory Method Pattern, Template Method Pattern, UML, Software testing, Xwindow

Effects of Implementing a Rapid Transit System on Ridership and Commercial Profits in

Region of Waterloo

- Built multimodal networks
 - Wrote Python script for extracting coordinates from Google KML file
 - Used C++ file stream to extract bus transit routes and bus stops
 - Conducted spatial, statistical, network analysis
- Applied Techniques:
- Network Analysis, Python Script, C++, ArcMap, ArcCatalog, Google Maps, Spatial Database, Cartography

Spatial Database for main campus of University of Waterloo

- Analyzed and developed the DB system from scratch
 - Modelled entity relationships using Enhanced ERD and Oracle Data Modeler
 - Used SQL for querying information using Oracle SQL Developer
- Applied Techniques:
- ArcCatalog, ArcMap, Spatial Database, FME, Cartography

Digital Camera Purchasing System - Database

- Analyze and develop the DB system from scratch
- Model entity relationships using Enhanced ERD and Oracle Data Modeler
- Use SQL for querying information using Oracle SQL Developer

EXPERIENCE

Fall 2013 Environment Ambassador, University of Waterloo

September 2013 - Present | Waterloo, Ontario

- Introduced Geomatics to students interested in applying to the program
- Guided and answered students' questions about their future major selection
- Took visitors for building tour at University of Waterloo

Data structure Teaching Assistant, China University of Geosciences

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

- Marked students' assignments, and final projects by providing feedback on how to improve understanding of concepts
- Taught students various data structures and algorithms and increased their understandings

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

August 2013 | University of Waterloo

- Improved software by ensuring body movements interacted with computer for user experience
- Reported all issues about positive and negative effects of the research