

# Renchen Sun

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Fisheries and Oceans Canada  
13th Floor  
200 Kent Street  
Station 13E228  
Ottawa Ontario K1A 0E6 Canada

Re: GIS Pilot Project

Dear Recruiter for Fisheries and Oceans Canada,

I am excited for the possibility of bringing my talents to Fisheries and Oceans Canada in the position of GIS Pilot Project as advertised on Jobmine of University of Waterloo. With my excellent skills and solid experience of geography information system and data management, I am confident that I can make solid contributions to this organization.

During my study at University of Waterloo, I achieved 3.92 out of 4.00 GPA. On top of that, I am proficient in programming in C++ for software development, utilizing DBMS (Oracle 11g, IBM DB2) for data management and applying GIS applications (ArcMap, ArcCatalog, ArcScene, FME) and techniques (Spatial Analysis, Network Analysis, Data Analysis & Management) to solve complex problems. With strong programming skills in C++, I have posted 10 projects on [Github](#). One of the projects is the Game of Quadris, a C++ implementation of Tetris which employed object-oriented software engineering techniques and graphical interface. With familiarity of DBMS and ArcGIS, I designed a spatial database for features on the campus of University of Waterloo by employing Oracle Spatial, data modeling, data integration, and data conversion techniques. What is more, I have a solid understanding of database concepts. One of the databases I have developed is the Digital Camera Purchasing System which I applied databases design techniques such as data modeling, entity relationship diagram, and SQL. When it comes to decision-making tool, I have experience in the analysis of the transportation system in Vancouver, which can support decision-making for travellers to travel around the city more efficiently. With in-depth familiarity with GIS techniques and a strong foundation of computer science and ability to learn quickly, I am confident that I am one of the best candidates for this position in this organization.

I would appreciate the opportunity to further discuss my future with Fisheries and Oceans Canada. I am currently available from 1:00 - 3:00 pm on Monday, Wednesday, and Friday; 4:00 - 6:00 pm on Tuesday and Thursday. I have attached my resume detailing my outstanding academic and strong technical skills.

Thank you, your time and consideration is highly appreciated. I look forward to speaking with you about this exciting opportunity.

Kindest Regards,

Renchen Sun

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## JUNIOR GIS ANALYST & PROGRAMMER

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

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### 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++
- In-depth knowledge of Database Management System, and GIS technologies
- In-depth knowledge of data integration, transformation, analysis, and conversion
- 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](http://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.