

Renchen Sun

#3004 J.R Finn, 290 Westmount Road North Waterloo, ON N2L 3G3

Cell Phone: 519 - 591 - 9660

Email: r26sun@uwaterloo.ca Website: csclub.uwaterloo.ca/~r26sun LinkedIn: <http://www.linkedin.com/in/renchensun>

Transport Canada, Surface and Marine Statistics Forecasts

Transport Canada

330 Sparks Street

Ottawa, ON

Canada, K1A 0N5

Re: Harnessing transportation data

Dear Recruiter for Transport Canada,

I am excited for the possibility of bringing my talents to Transport Canada in the position of Harnessing transport data as advertised on Jobmine of University of Waterloo. Transport Canada is responsible for transportation policies and programs. It promotes safe, secure, efficient and environmentally-responsible transportation, which I am interested in contributing. With excellent skills and solid experience in programming, GIS and DBMS, 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 utilizing GIS applications (ArcMap, ArcCatalog) and GIS techniques (Data analysis & processing, Network Analysis, Spatial Analysis) with strong programming skills. I have nearly one year experience of using DBMS such as Oracle 11g and IBM DB2 for data management. One of the database projects I have made is the Geospatial database for features on the campus of University of Waterloo which I applied some techniques such as Oracle Spatial, data modelling, processing, refining and conversion techniques. In addition, I developed a Digital Camera Purchasing System by applying essential databases design techniques such as data modeling, ERD, and SQL. As for transportation analysis, 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. Even more, as a quick and passionate learner, I learned more computer science knowledge than other Geomatics students in the same time at University of Waterloo. I posted 10 projects on [Github](https://github.com). One of the projects I have done is the Game of Quadris, a C++ implementation of Tetris which employed object-oriented software engineering techniques and graphical interface. I found it interesting in combining computer science and geography information system together. With in-depth familiarity with DBMS & GIS techniques and a strong foundation of computer science and the ability to learn quickly, I am confident that I am one of the best candidates for this position in your team.

I would appreciate the opportunity to further discuss my future with Transport 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

Renchen Sun

#3004 J.R Finn, 290 Westmount Road North Waterloo, ON N2L 3G3

Cell Phone: 519 - 591 - 9660

Email: r26sun@uwaterloo.ca Website: csclub.uwaterloo.ca/~r26sun LinkedIn: <http://www.linkedin.com/in/renchensun>

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.