Xinyue Pi

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EDUCATION

Candidate for Master of Environmental Studies, **Planning**

University of Waterloo, Waterloo, ON, Canada   *September 2014-Present*

Bachelor of Environmental Studies, **Honors Geomatics**

Minor of Computer Science; Diploma of Excellence in GIS

University of Waterloo, Waterloo, ON, Canada   *September 2012–June 2014*

Bachelor of Engineering, Remote Sensing Science and Technology

Wuhan University, Wuhan, Hubei, China   *September 2010–June 2012*

SUMMARY OF QUALIFICATIONS

- Comprehensive knowledge of urban planning principles developed through experience of academic projects
- Various knowledge and experience in Geograpic Information System (GIS), spatial analysis, database design and management, and remote sensing
- Proficient in ArcGIS, AutoCAD, Oracle Spatial, SPSS and Microsoft Office
- Computer programming knowledge including SQL, Java, Python and C++ achieved with a computer science minor
- Excellent oral and written communication skills developed through four years of extracurricular activity experience
- Solid presentation abilities strengthened through multiple public speeches including one on Mayor's forum
- Strong teamwork skills developed through three years experience with GIS and remote sensing projects

AWARDS & SCHOLARSHIPS

University of Waterloo, Waterloo, ON, Canada

- International Masters Student Award   *September 2014 and January 2015*
- Environmental Studies Graduate Experience Award   *September 2014*
- Dean's Honours List   *Winter 2014*
- Chinese Universities Entrance Scholarship   *September 2012*

Wuhan University, Wuhan, Hubei, China

- Third Prize Scholarship for Outstanding Students   *June 2012*
- Outstanding Youth Volunteer   *May 2011*
- First Prize of Wuhan University Early Admission   *February 2010*

WORK EXPERIENCES

Assistant Urban Planner Internship

  City Planning Department, Xiangyang, China   *June 2014-August 2014*

- Generated land use maps with ArcGIS and AutoCAD
- Updated and maintained regional database in Oracle using SQL and translated data into geodatabase with FME
- Analyzed city land use data and demographic data quantitatively using Excel and qualitatively through reports

Teaching Assistant, University of Waterloo   *September 2014–December 2014*

- Collaborated to develop marking rubrics in assessing student learning in Economic Analysis in Regional Planning
- Addressed student questions during lab and office hours, and via online message boards and email
- Assessed student learning through evaluating 50 assignments 9 times in one term

RESEARCH EXPERIENCES

Action Plan for Age friendly Huron East municipality

  University of Waterloo   *January 2015-Present*

- Develop community profile through meetings and interviews with Huron East Council and staff representatives
- Design survey questions based on field visit and community profile
- Collect and analyze survey data using axial coding and constant comparison method

Risk Assessment of Coastline Changes Using Remote Sensing and GIS

  University of Waterloo   *January 2014-April 2014*

- Mapped coastline in Santa Barbara Sand Shed from remote sensing images
- Calculated shoreline change rate using ENVI and Digital Shoreline Analysis System in ArcGIS
- Calculated and mapped Coastal Vulnerability Index (CVI) based on shoreline change rate, coastal slope, population density and land cover.

Location Analysis Using Open Source GIS: QGIS and PostGIS

  University of Waterloo   *March 2014-April 2014*

- Assessed the accessibility of schools to parks, libraries, rapid transit lines and street intersections using QGIS
- Mapped and ranked the selected schools combining four equal weighted criteria
- Evaluated the performances of QGIS and PostGIS and compared with ArcGIS

Simulation of Water Availability

University of Waterloo *Feburary 2014–April 2014*

- Examined the historical water flow, temperature and water storage as baseline
- Simulated the future climate and hydrological changes in selected watersheds
- Analyzed the implied socio-economic changes such as demographic shifts and economic condition transition

Impact of Land Use on Water Quality

University of Waterloo *September 2013–December 2013*

- Generated linear regression of how water quality responded to land-use/land-change (LUCC) using buffer analysis in ArcGIS
- Simulated the influences of LUCC on water quality using Better Assessment Science Integrating point & Non-point Sources (BASINS) and ArcGIS
- Compared the water quality simulation results using BASINS and ArcGIS
- Developed new knowledge of long-term water resources planning and management of city land-use planners and government resource managers

Database Development Using Open Data

University of Waterloo *February 2013-April 2013*

- Queried and documented the database in Oracle using SQL Developer
- Translated and transformed data from Oracle into geodatabase using FME
- Analyzed the accessibility using ArcGIS

Site Selection Using Spatial Analysis

University of Waterloo *November 2012–January 2013*

- Created three models in ArcGIS based on slope, distance and existing buildings
- Selected building site using the final score generated through combining criteria

VOLUNTEER EXPERIENCES

Webmaster in Association of Graduate Planners (AGP)

University of Waterloo *November 2014–Present*

- Created, edited and maintained content for AGP Website
- Coordinated with other AGP members to provide support to grad students

Volunteer in Annual Mayor's Forum on Age Friendly Waterloo

Waterloo, ON, Canada *November 2014*

- Organized roundtable discussions on Communication and Information section in a timely manner
- Summarized key findings to prepare for and deliver a 5 minute interactive presentation to the entire forum

Volunteer on Computer Science for You Day

University of Waterloo *December 2012*

- Welcomed high school students and assisted with activities on campus

President of Youth Development Association

  Wuhan University   *September 2011–May 2012*

- Founded this association to connect students with top GIS companies and provide information on future career
- Designed, planned and organized the Total Station Competition which attracted up to 150 undergraduate students
- Negotiated sponsorship for the Mock Job Interview Competition and acted as the host in the final contest

RESEARCH INTERESTS

- Rental housing market
- GIS and spatial analysis
- Agent-based modeling
- Land-use and land-cover change
- Transportation planning

RELEVANT COURSES

Geographic Information System (GIS)

- Spatial Analysis Using Geographic Information Systems
- Spatial Databases
- Geographic Information System Project
- Management Issues in Geographic Information System

Planning

- Planning Paradigms and Theory
- Land Use Planning Fundamentals
- Methods of Planning Analysis
- Modelling the City
- Planning Professional Practice
- Research Design
- Introductory Planning Project

Geomatics

- Introduction to Geomatics
- Foundation of Cartography
- Surveying
- Spatial and Aero-Photographic
- Principle and Application of Global Positioning System (GPS)
- GPS Surveying and Data Processing
- Computer Graphics

- Error Processing of Spatial Data
- Digital Image Processing
- Advanced Remote Sensing Techniques
- Remote Sensing Project

Computer Science

- Object-Oriented Programming and Design
- Data Structure
- Database Principle and Application
- Computer Network and Application
- Introduction to Software engineering
- Management Information systems
- Computer Application in Business Databases
- Business Systems Analysis
- Networks and Distributed Computer Systems

Economics

- Introduction to Microeconomics
- Introduction to Macroeconomics
- Introduction ot Mathematical Economics

Geography

- Introduction to Geography
- Environment and Development in a Global Perspective
- Human Dimensions of Global Climate Change
- Approached to Research in Physical Geography
- Hydroclimatology

Math

- Advanced Mathematics
- Linear Algebra
- Methods of Mathematical Physics
- Probability Theory and Statics
- Multivariate Statistics