

HANNA OH

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DESIRED POSITION: GIS Assistant

EDUCATION

2010 – 2011 **Geographic Information Systems - Applications Specialist**
Sir Sandford Fleming College – Lindsay, ON

2005 – 2010 **Honours Geoscience, Bachelor of Science**
Minor: Geographic Information Systems
McMaster University – Hamilton, ON

PREVIOUS WORK EXPERIENCE

June-Aug. 2011 GIS Assistant

Ontario Ministry of Natural Resources – Peterborough, ON

- Assisted with land cover classification for the Far North Land Cover Mapping Project through tagging of forest disturbance features
- Automated some disturbance tagging and masking steps with Visual Basic for Applications (VBA) and Python scripts
- Utilized normalized difference burn ratio, normalized difference vegetation index, mid infrared, standard false colour, and true colour composite imagery to identify and analyze disturbance features with greater accuracy
- Produced masks of non-disturbance features (clouds, water, surround) using Definiens Developer 7.0 and ArcMap 9.3

Jan.-June 2011 Co-op Project: Mapping Ontario's Headwater Areas

Client: Ontario Headwaters Institute – Toronto, ON

- Part of a pilot, GIS-based project that incorporates some preliminary watershed and headwater data
- Programmatically delineated headwater (1st and 2nd order) catchments within the Oak Ridges Moraine watersheds using Python and Arc Hydro
- Generated statistics such as percentages and types of surficial geology, land use, for each headwater catchment
- Produced a hotspots web map of the study area, showing statistics for each watershed and its headwater catchments

May-Sep. 2010 GIS Assistant

Ontario Ministry of Natural Resources – Peterborough, ON

- Tagged forest disturbance features and edged matched disturbance scenes as a part of the Far North Land Cover Mapping Project
- Developed strong skills in data management and analysis

- Performed field verification of the tagged forest disturbances around the Nagagamisis area for the Far North Land Cover Mapping Project
- Helped implement the Endangered Species Act regarding woodland caribou at Nagagamisis Provincial Park
- Received training in and practiced Ecological Land Classification in the field
 - Developed good basic skills in soil and plant identification for Northern Ontario
- Used a GPS for navigation and data collection
- Created spatial and related attribute data for data collected in the field

Jan.-Apr. 2010 Geospatial Analyst (GSA) Intern

Bell Canada, Professional Management Program – Mississauga, ON

- Points of Interest (POI) Project
 - Researched and compiled cartographic data on POI for census metropolitan areas in Ontario
- Mall Baseline Project
 - Digitized floor plans of shopping malls in the Greater Toronto Area
 - Performed quality assurance on previously digitized data to ensure completeness and accuracy
 - Produced maps to be used in marketing analysis and presentations
- Mall Neighbourhood Study Project
 - Acted as Project Lead and as a liaison between the GSA department and the marketing department
 - Edited and assigned attribute information to land parcels around major malls in the Greater Toronto Area
 - Produced summary reports on data creation methods
 - Made progress presentations and a final presentation of the project with team members at departmental meetings
- Frequently provided GIS assistance and training to new GSA interns and interns in other departments

VOLUNTEER EXPERIENCE

Jul. 2009/2010 Stream Team Leader

Check Your Watershed Day, Ecospark – Percy Creek, ON

- Received training in an Ontario Stream and Assessment Protocol (OSAP) module
- Lead and coordinated a team of volunteers in monitoring small stream flow
 - Conducted visits to specified field sites to collect data
 - Measured stream discharge using volume/time, hydraulic head, or distance/time
- Documented barriers to fish movement (ie. perched culverts)

GIS SKILLS

- Proficiency in ESRI's ArcGIS Desktop 9.x and ArcView 3.3 software and extensions
 - Advanced working knowledge of projections and coordinate systems
 - Extensive experience analyzing and modeling vector and raster data
 - Stream network and watershed delineation using the Arc Hydro Toolset and Spatial Analyst Toolbar

- Simple and weighted spatial multi-criteria decision analysis
- Geocoding and georeferencing
- Extensive digitizing experience
- Determining least cost paths
- Excellent knowledge of cartographic concepts and cartographic convention
- Experience with AutoCAD 2010
- Good working knowledge of Geomatica 10.3 from PCI Geomatics
 - Experience using advanced image processing techniques (such as filtering, and image merging with HIS, HPF, and PCA methods, etc.)
- Experience with Definiens eCognition Professional 4.0.6 and Definiens Developer 7.0
 - Delineating, characterizing, and classifying image objects
- Aerial photograph and satellite image analysis and interpretation
 - Good knowledge of spectral properties and image colour manipulation
 - Experience working with standard false colour, true colour, normalized burn ratio (NBR) composite, and normalized difference vegetation index (NDVI) composite imagery
- Strong web GIS skills
 - Designing, accessing, analyzing, and manipulating web GIS content using HTML, cascading style sheets (CSS), Java Script, and ColdFusion
 - Creating web GIS pages with an acquired spatial and attribute data set
 - Designing and creating simple websites
 - Good knowledge of web cartography design principles
 - Software used: Dreamweaver CS4, Aptana Studio 1.5, ArcIMS 9.3, Autodesk MapGuide 6.3
 - Utilized these web GIS software applications to dynamically publish GIS data over the Internet

DATABASE AND PROGRAMMING SKILLS

- Good database design and management skills
 - Designing, building, and implementing databases to fit conceptual and logical models
 - Experience with database backup and recovery (for Oracle, SQL Server, and MS Access)
 - Competent with SQL, T-SQL, and PL/SQL
 - Performed database creation and processing tasks with SQL
 - Created, edited, and managed databases with PL/SQL using the Oracle Database Management System
 - Experienced user of:
 - Microsoft Access 2007
 - Oracle 9i, 10g, and 11g on Windows XP and Sun Solaris
 - Oracle Enterprise Manager (OEM)
 - SQL Server 2000 on Windows 2000, and SQL Server 2005 on Windows Vista
 - Ability to manage spatial data using Oracle Spatial
 - Performed various spatial analyses using Oracle Spatial operators and functions
- Strong programming skills for the customization of GIS applications
 - Graphical user interface design
 - Customization of GIS applications using VBA, Python, and ArcObjects
 - Customizing routine analysis tasks in GIS using ModelBuilder and Python 2.5 scripting

OTHER SKILLS, CERTIFICATION, AND TRAINING

- Proficient in MS Office, particularly Word, Excel, and Word
- ESRI Virtual Campus Training Certificates in:
 - Learning ArcGIS Spatial Analyst
 - Learning ArcGIS 3D Analyst
 - Introduction to ArcGIS 9 Geostatistical Analyst
 - Creating, Editing, and Managing Geodatabases for ArcGIS Desktop
 - Geoprocessing with ArcGIS Desktop
- Recent Workplace Hazardous Materials Information System (WHMIS) training (July 8th, 2011)

REFERENCES

References are available upon request.