Behzad Vahedi

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Profile

A GIScientist with engineering background and experience in GIS development. Passionate to develop GIS services and software, provide GIS solutions, and to work on challenging and real world spatial problems.

Research Interests

- Spatial Analysis
- Spatial Reasoning
- Geospatial Semantics
- Machine Learning
- Geographic Information Retrieval
- Spatial Data Mining
- Volunteered Geographic Information
- Natural Language Processing

Education

PhD | Geographical Information Science | University of California Santa Barbara | in progress

M.Sc. | GIS Engineering | K.N.Toosi University of technology, Tehran, Iran | 2015

Thesis title: Automatic assessment and presentation of completeness, positional accuracy, and attribute accuracy of linear features in VGI

B.S. | Geomatics Engineering | K.N.Toosi University of Technology, Tehran, Iran | 2012

Thesis title: Combining Sensors for Intelligent Updating of Spatial Data

Skills & Abilities

Spatial Data analysis, Geographic Information Retrieval, Geospatial Semantics, Computer modeling, Project management

- GIS:

ArcGIS (desktop, online), Oracle Spatial, QGIS, Geoserver, R

- Programming:

Java, Android, Haskell, Matlab, C#, Python, ArcPy, HTML.

- Remote Sensing:

familiar with: ENVI, ILWIS, IDRISI

Working Experience

Graduate Student Researcher | University of California Santa Barbara — **Sep. 2015 – Present**

GIS engineer and developer | Naghshara Consulting Engineers — **Mar. 2015 – aug. 2015**

GIS and CAD specialist | ZBH company — **JUL. 2012 – sep. 2012**

Projects

GauchoSafe

An android app that lets users report their location when they feel unsafe, and will report their location and personal information in case of danger. It also creates a heatmap of the reported location, available both on the app, and in a web interface for police officials.

Earthquake Explorer
A Java application that visualizes earthquakes using USGS GeoJSON live earthquake feed. Users can query earthquakes spatially, temporally, and thematically, based on their magnitude.

Indoor positioning using WiFi signals (fingerprinting method)
Utilized C# to generate a signal strength database (radio map) and estimate location of user

A shortest path service in a client-server environment
Utilized PHP, HTML, and Matlab to create a web service with shortest path suggestions

Creating a web mapping system
Utilized Geoserver and HTML to create a web mapping system with WMS and WPS capabilities

Earthquake risk zonation in Tehran using fuzzy logic models
Utilized fuzzy models and ArcGIS in order to zonate Tehran province based on earthquake hazard

Publications

- Vahedi, B., Kuhn, W., & Ballatore, A. (2016). Question-based spatial computing—A case study. In Geospatial Data in a Changing World (pp. 37-50). Springer International Publishing.
- Allen, C., Hervey, T., Lafia, S., Phillips, D. W., Vahedi, B., & Kuhn, W. (2016, September). Exploring the Notion of Spatial Lenses. In International Conference on Geographic Information Science (pp. 259-274). Springer International Publishing.
- Vahedi, B., Alesheikh, A. A., & Honarparvar, S. (2014). Quantitative Assessment of Pragmatic Quality of Volunteered Geographic Information Using Fuzzy Linguistic Quantifiers and OWA Operator. Journal of Geomatics Science and Technology, 3(4), 65-76.
- Vahedi, B., & Alesheikh, A. A. (2016). Assessing the Attribute Accuracy of Volunteered Geographic Information. Journal of Geomatics Science and Technology, 5(3), 49-64.

Conference Presentations

- Revisiting the Notion of "Continuous Fields", Association of American Geographers (AAG) Annual Meeting, April 2017, Boston.
- Exploring the Notion of Spatial Data Lenses. Ninth International Conference on Geographic Information Science (GIScience 2016), September 2016, Montreal, Canada
- Question Based Spatial Computing, 19th AGILE International Conference on Geographic Information Science, June 2016, Helsinki, Finland.
- Assessing the quality of VGI data, 21st National Geomatics Conference, February 2013, Tehran, Iran.

Poster

- Core Concepts of Spatial Information, Towards Question-Based Computing, Center for Spatial Studies Spatial@Local, Santa Barbara, June 2017

Teaching

- Teaching assistant for Maps and Spatial Reasoning (GEOG W12), UCSB, Fall 2017
- Teaching assistant for Introduction to GIScience (GEOG 176A), UCSB, Fall 2016
- Teaching assistant for GIS I and GIS II courses, KNTU, 2014

Honors and Awards

- Three times recipient of Jack and Laura Dangermond travel scholarship
- Best paper in the "21st National Geomatics Conference", National Cartographic Center, Tehran, Iran, 2013.