Behzad Vahedi

5704 Ellison Hall, Department of Geography,
University of California Santa Barbara
Santa Barbara, CA 93116

+1 (805) 88671060
behzad@geog.ucsb.edu
behzad-vahedi.github.io

Profile

A geospatial data scientist with engineering background and computer science experience, and strong technical and analytical skills. Passionate to develop services and software, provide GIS and spatial solutions, and to work on challenging and real world spatial problems.

Education

PhD in Geographical Information Science Expected graduation: 2019
University of California Santa Barbara. GPA 3.97/4.0
Advisor: Prof. Werner Kuhn

MSc in GIS Engineering 2012 - 2015
K.N.Toosi University of Technology, Tehran, Iran. GPA 18.40/20
Advisor: Prof. Ali A. Alesheikh

BSc in Geodesy and Geomatics Engineering 2008 - 2012
K.N.Toosi University of Technology, Tehran, Iran. GPA 16.41/20.
Advisor: Prof. Ali A. Alesheikh

Honors and Awards

- Three times recipient of Jack and Laura Dangermond travel scholarship 2017
- Best paper in the 21st National Geomatics Conference, Iranian National Cartographic Center 2013
- Merit based admission to graduate program in GIS Engineering 2012
  1^{st} rank among BSc students in Geodesy and Geomatics Department
  K.N.Toosi University of Technology
- Ranked top 1% among more than 300,000 high school students in the National University Entrance Exam, Iran 2008

Skills & Abilities

Programming:	Java, Python, Javascript, C#, Android, Haskell, MATLAB, HTML
GIS:	ArcGIS, QGIS, Oracle Spatial, GeoServer, R
Libraries:	OpenNLP, Core NLP, ArcPy, NumPy, Scipy, Leaflet
Remote Sensing:	ENVI, ILWIS, IDRISI

Professional Experience

Center for Spatial Studies, UC Santa Barbara Sep. 2015 - now

Graduate Research Assistant

- Research on modeling big spatial data as field as an extension to raster
- Natural Language Processing of spatial queries
- Research on "Core Concepts and Computations of Spatial Information"
- Algebraic specification and functional implementation of spatial core concepts
- Extending Map Algebraic operations from raster to field data model

Naghshara Consulting Engineers 2012 - 2013

GIS Developer and Engineer

- Designing Data model and database structure
- Design and implementation of spatial databases
- Producing specialized maps for different applications

Zist Boom Hendesi Summer 2012

GIS Specialist

- Development and implementation of GIS Applications in Arc Object
- Developing AutoCAD tools

Projects

GauchoSafe Summer 2017

STKO Lab, University of California Santa Barbara

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.

- Technology stack: Android, HTML, CSS, PHP, Leaflet.js

Earthquake Explorer Winter 2015

A Java app that visualizes USGS Earthquakes Hazards Program data (live GeoJSON earthquake feed). Users can view earthquake events and query them spatially, temporally, and thematically, based on their magnitude. Summary reports are generated for all earthquake events, along with the selected events in the user-defined area of interest, and are available for export.

- Technology stack: Java, GeoJSON, OSM

Indoor positioning (Location Estimation and Navigation) Winter 2014

A location estimation project that uses WiFi signal strength to estimate the location of users. Location is estimated using a K-nearest neighbor method and comparing measurements with a signal strength database also called radio map. Then users are navigated towards their destination using visual and audio guides.

- Technology stack: C#

A shortest path suggestion service in a client-server environment Fall 2014

A shortest path suggestion web service that calculates the shortest path using Dijkstra's and A* algorithm.

- Technology stack: Matlab, PHP, and HTML

Publications

Question-based spatial computing, A case study **2016**

Vahedi, B., Kuhn, W., & Ballatore, A.
Geospatial Data in a Changing World (pp. 37-50). Springer International Publishing.

Exploring the Notion of Spatial Lenses **2016**

Allen, C., Hervey, T., Lafia, S., Phillips, D. W., Vahedi, B., & Kuhn, W.
In International Conference on Geographic Information Science (pp. 259-274). Springer International Publishing.

Quantitative Assessment of Pragmatic Quality of Volunteered Geographic Information Using Fuzzy Linguistic Quantifiers and OWA Operator (in Persian) 2014

Vahedi, B., Alesheikh, A. A., & Honarparvar, S.
Journal of Geomatics Science and Technology, 3(4), 65-76.

Assessing the Attribute Accuracy of Volunteered Geographic Information (in Persian) **2016**

Vahedi, B., & Alesheikh, A. A..
Journal of Geomatics Science and Technology, 5(3), 49-64.

Teaching Experience

University of California Santa Barbara, Department of Geography:

- Maps and Spatial Reasoning (GEOG W12), Prof. Keith Clarke, Fall 2017
- Introduction to GIScience (GEOG 176A), Prof. Werner Kuhn, Fall 2016

K.N.Toosi University of Technology:

- GIS I and GIS II, Prof. Ali A. Alesheikh, Spring 2014

Language Proficiency

Persian (Native), English (Fluent), Arabic (Intermediate), French (Basic)