SHAUNAK VAIRAGARE
GIS WEB DEVELOPER

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*Available for relocation

- **Innovative software engineer** offering five years of experience in Web development and GIS involving full software development lifecycle – from concept through delivery of next-generation applications and customizable solutions.

- **Expert in advanced development methodologies,** tools and processes. Strong OOP and Design Patterns skills. Deep understanding of OOAD and Agile methods.

- **Creative problem solver** and experience in designing software workflows for complex Geospatial applications on web, desktop and mobile platforms.

EDUCATION

Master of Science in Computer Science   Aug. 2009 – Dec 2011
University of Houston, Houston, Texas, USA.
Courses: Software Design, Software Development Practices, Ruby On Rails, Cyber Physical System ,Medical Robotics, Medical Imaging ,Artificial Intelligence

Bachelor of Engineering in Computer Science & Engineering   Aug. 2003 - May 2007
Nagpur University, Nagpur, India.

SOFTWARE DEVELOPMENT IN JAVA TECHNOLOGIES (5 Years)

Java Technologies	Java, J2EE, Struts, Spring, Hibernate, Java Imaging API, ANT
Front End Technologies	JSP, JavaScript, JSON, Geo-JSON
Databases	MySQL, PostgreSQL, MS SQL Server 2008
Web Servers	JBOSS, Tomcat
Other Technologies	Ruby, Ruby on Rails, Objective C (iPhone)
Operating Systems	Unix, Windows

GIS/ LBS TECHNOLOGIES (4 Years)

GIS Server	ESRI ArcGIS Server (REST and SOAP APIs), Geo-Server , Autodesk Location Logic (Open LS) Decarta (Open LS), Location Guru LBS Platform (Self Developed)
GIS Mapping	WMS, WFS, SLD, OpenLayers, Raster, Bing Maps, Google Maps
GIS Data Formats	ESRI Shape files, GDF, RDF - Navteq, Tele Atlas, Map My India, Lead Dog, LiDAR, GeoTIFF, LAS
GIS Tools	ESRI ArcGIS 10, FME, Geo-Server, GDAL, LibLAS, Geo-Tools, Java Topology Suite,
Cartographic Database	PostgreSQL/PostGIS , MS SQL server 2008 Spatial

PROFESSIONAL EXPERIENCE & PROJECTS

GIS Web Developer (Research Assistant)   Aug 2009 - Present
University Of Houston , Under Dr. Gino Lim , Industrial Engineering
Flood Information Distribution System, A Ruby on Rails based GIS system for flood warning and alert system in Harris County using existing sensor networks of various agencies like Houston Transtar, HCFCD , USGS, City of Houston Public Works.
This project is going to be used by EMS agencies like 911, 311, and will also be available to public.

Key Features: Java, Ruby, Rails, MSSQL Server 2008 Spatial, Map Interface Web Site and Mobile client for Emergency dispatch vehicles, flood data broadcast using VHF (Public Broadcasting, Houston) in case of emergency, ArcGIS for LIDR data, Bing maps, creating Shapefiles for sensor networks, flood emergency level calculations using Historical Flood Data and LiDAR. Real time flood water rendering on map.

Software Developer   Aug. 2007 - Jul. 2009
LocationGuru Solutions Private Limited, Nagpur, India
- **Java-based Software Development, Product Planning and Engineering, Research and LBS Platform Development**

Key Features: Java Web Development, LBS Platform, Image Processing, Real Time Navigation Algorithms, Geospatial Information System, Map Tiling and Rendering Algorithms, Geocoding, Reverse-Geocoding, POI, GIS Hosting, GPS positioning systems, LBS Product concept Planning and Design

Continued…

Products & Applications (www.locationguru.com)
SmartGeo Platform , Smart Family, Vehicle Tracker, Smart Pilot (Navigator), My World, Emergency Systems, Smart Search, Emergency Services.

Student Intern	Sep 2006 - Apr. 2007

GlobalLogic Inc, Nagpur, India
Location Diary- A mobile based Location Based Services (LBS) application
- Designed and implemented (JAVA) a desktop application for turn-by-turn navigation instructions.
Key Features: J2ME, Path-Planning Algorithms, Mobile Maps, GPS , Graph Optimizations

Computer Lab Technical Assistant (Part Time)	July 2006 - May 2007

R.K.N.E.C Computer Science Department
Key Features: Basic System Administration , Computer Maintenance and Troubleshooting.

OTHER PROJECTS

Geolocator - for Baker Hughes , Houston	Jan. 2011 - May 2011

iPhone application backed with a GIS database and Ruby on Rails web service to find and service wells.

Wireless Sensor Networks using Arduino to aid Farming	Jan. 2011 - May 2011

As a semester project for Cyber Physical Systems Course. Also has a front-end developed in Ruby on Rails

Design and Simulation of Path Finding Algorithms for Natural Terrain Explorers	Jul. 2006 - May 2007

- Designed and implemented (Java) a simulation of Navigation Algorithms for autonomous robotic explorers.
 Key Features: Shortest Path and Efficient Navigation algorithms for Space Exploration,
Graphical Simulation in Java, and in VC++ using DirectX Graphics technology.

Micro-Mouse: A Self-Guided, Maze-Solving Robot	Jan. 2006 - Jun. 2006

- Designed, simulated (Java), and implemented Navigation Algorithms for an autonomous robot.
Key Features: Autonomous Robotics, Embedded Systems programming, Graphical Simulation in Java,
Decision-Making Algorithms.

PRIZES & FELLOWSHIPS

Graduate Assistant Tuition Fellowship	University of Houston	Aug 2009 – Dec 2011
1st Prize, Paper Presentation	IEEE Technovision '07 (National Level Technical Event)	Mar. 2007
1st Prize Robotic Dirt Race	IEEE Technovision '07 (National Level Technical Event)	Mar. 2007
1st Prize Pick N Place	IEEE Technovision '07 (National Level Technical Event)	Mar. 2007
1st Prize Robotic Mud Race	Raisoni Technovision (National Level Technical event)	Mar. 2007
2nd Prize, Online Coding	IEEE Technovision '07 (National Level Technical Event)	Mar. 2007
1st Prize, Tech-Float	IEEE Technovision '06 (National Level Technical Event)	Mar. 2006
Finalist, Micro-Mouse	IIT Techfest -06 (International Level Tech Festival, IIT Powai)	Jan. 2006
2nd Prize, Paper Presentation	AAGAAZ 2005 (State-Level Technical Symposium)	Aug. 2005
2nd Prize, Contraption	IEEE Technovision '05 (National Level Technical Event)	Feb. 2005

AFFILIATIONS & LEADERSHIP

Member/Volunteer	Graduate Indian Students Organization	Aug. 2009 - Present
Student Member	IEEE	Aug. 2009 - Present
Press Coordinator	Student Representative Council	Aug. 2005 - May 2007
Student Member	Semicolon Tech Club	Jul. 2004 - May 2007
Technical In-Charge	Computer Science Society	Aug. 2006 - May 2007
Technical Coordinator	Computer Science Society	Aug. 2005 - Aug. 2006

References available on request