

Ujaval Gandhi

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Summary

I am an educator who is passionate about advancing the use of open-source technologies in teaching and research. I spent 15 years at Google building large-scale satellite data processing systems and managing GIS teams. Currently focused on creating a free and open learning platform to bridge the gap between traditional GIS/Remote Sensing skill sets and the needs of modern spatial analytics. I am a certified QGIS.org trainer and an expert in QGIS, Google Earth Engine, Python, and GDAL with domain expertise in water resources management and urban planning.

Experience

April 2020 - PRESENT

Founder, Spatial Thoughts, India (current)

- Founded Spatial Thoughts with the mission to allow anyone to learn and master modern geospatial technologies.
- Create and publish high-quality **open-source learning materials** on QGIS, Python, GDAL and Google Earth Engine. The materials are cited as one of the top learning resources globally and are used by **1,000,000+** people worldwide each year.
- Offering cohort-based online instructor-led classes attended by participants from **100+** countries.
- Corporate clients include Google Inc, Boston Consulting Group (BCG), World Resources Institute (WRI), and Environmental Defense Fund (EDF).

June 2013 - March 2020

Staff Geo Data Strategist, Google, Bangalore, India

- Manage the aerial imagery operations team of 150+ operators across India offices.
- Led the Google Earth Outreach team in India and was responsible for conducting technical workshops and building partnerships at top research universities. Trained 750+ scientists and researchers on **Applied Remote Sensing techniques** using cloud computing.
- Mentored researchers on programming techniques to work with large datasets, primarily in the areas of Ecology/Conservation and Water Resources.
- Represented Google India on a key collaboration for capacity building with the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India.

November 2008 - June 2013

Senior Geo Data Strategist, Google, Bangalore, India

- Led the Google Maps Gallery partner support team.
- Wrote and launched a Python plugin - Google Maps Engine Connector for QGIS.
- Key role in setting up and scaling 25 member 3D modeling team at Hyderabad
- Wrote a scalable QA system for large amounts of satellite imagery

January 2007 - November 2008

Senior GIS Specialist, Google, Bangalore, India

- Expanded the core imagery and vendor teams for doing large scale imagery operations.
- Built the GIS team in India. Interviews, hiring, conversion and pilot projects.

June 2006 - January 2007

Technical Account Manager, Google, Hyderabad, India

- Piloted various outsourcing projects with a small team of contractors..

January 2006 - June 2006

GIS Data Acquisition Associate, Adecco Flexione Workforce Solutions Limited, Bangalore, India

(On contract at Google India Pvt Ltd)

- Designed and implemented a manual alignment and color correction process for satellite imagery using ERDAS Imagine
- Hired a pilot team to outsource quality improvement process to India.

August 2005 - December 2005

Google Earth Enterprise System Engineer, ABE Services, Mountain View, CA, USA

(On contract at Google Inc)

- Sales engineer for Google Earth Enterprise products.
- Carried out 2 on-site deployments of Google Earth Enterprise Server.

January 2005 - June 2005

Road Crew, Mandli Communications, Florida, USA

- Worked as a part of the road crew mapping the state of Florida with high-accuracy GPS and photo logs.
- Responsible for mapping and collecting photo-logs and video-logs along with sub-meter GPS data on more than 5000 miles of state and interstate routes.

September 2003 - September 2004

GIS analyst, Upper Midwest Freight Coalition, Madison,WI, USA

- Directed and supported research on means for increasing cooperation among transportation agencies in the Midwest region.
- Provided GIS support to 20 researchers from 3 different universities for mapping and analysis. Made several presentations to state governments and research organizations.

May 2002 -July 2002

Summer Intern, Indian Institute of Remote Sensing, Dehradun, India

- Part of a team of 9 students developing a multimedia tutorial on Remote Sensing for instructional use at India's premier remote sensing facility.

Education

August 2003 - December 2004

University of Wisconsin - Madison

- Masters of Science(MS), Geospatial Information Engineering
- GPA 3.8/4.0, Student of the Year 2003 and 2004

August 1999 - June 2003

Birla Institute of Technology and Science (BITS) - Pilani

- Bachelor of Engineering (BE), Civil Engineering
- GPA 9.2/10.0

June 2009 - June 2010

National Law School of India University - Distance Learning

- Post Graduate Diploma in Intellectual Property Rights Law

Publications

Gandhi, U. (2024). JavaScript and the Earth Engine API, Aggregating Images for Time Series, Advanced Vector Operations In: Cardille, J.A., Crowley, M.A., Saah, D., Clinton, N.E. (eds) Cloud-Based Remote Sensing with Google Earth Engine. Springer, Cham. <https://doi.org/10.1007/978-3-031-26588-4>

References

Available upon request.