Aman Bagrecha

twitter.com/aman_bagrecha | jainaman588@gmail.com | github.com/amanbagrecha | amanbagrecha.github.io
+91 9113094076 | Bengaluru, India

EXPERIENCE

Rotten Grapes Pvt Ltd, Remote— *GIS Developer* (Feb 2021 – May 2021)
Full Stack GIS developer working on web-GIS application using Openlayers, Django, Postgis and Geoserver as main stack.
Worked on two projects- Photo Management application for Brightminds and Drone application for Dronnav.

Research Intern, IISc— *Surface Drainage modelling using GIS* (Oct 2020 – May 2021)
Research Intern under Prof. G L Sivakumar Babu worked on Geographic Information System (GIS) based algorithmic design incorporating cascade modelling, and non-stationarity analysis based on Global Climate Models (GCMs) for rainfall Intensity. Project Link

ThinkTac, Malleswaram— *Educator* (June 2018 – August)
Applied laws of physics to prototype a novel Catapult to maximise range. Also, Involved in documentation and graphics team.

President, ASCE Student Chapter (Feb 2020 – Feb 2021)
ASCE Student Chapter RVCE is technical club for civil engineering students. Former ASCE editor for *The Avenue.* Articles to Grid Planning, Ganges rejuvenation, Bengaluru lakes in the annual magazine.

EDUCATION

R.V college of Engineering, Bengaluru, India— *B Tech.* (2017 – 2021)
GPA : 8.94; Bachelors in Civil Engineering.

Bangalore International Academy, Bengaluru, India— *High school* (2015 – 2017)
Studied Science with 90.4 % in CBSE 12 boards.

PROJECTS

SAR Analysis— Analysis of Flood Prone region using SAR in GEE
To Detect Y2020 flood using Sentinel-1 SAR images on google earth engine in northern region of India.
Project Link

Impact analysis of Ozone concentration— *ArcMap, ArcGIS* (June 2020)
Hypothesised if ozone concentration depends on elevation. Interpolated the ozone values at air quality stations in California and tested the hypothesis. Project Link

Land Surface Temperature of Bengaluru— *ArcMap, ArcGIS* (July 2020)
Calculated the Land Surface temperature of Bengaluru city using Landsat 8 thermal band product. The procedure applied here was using Maximum likelihood classification and then assigning emissivity.
Project Link

Store-Info— *Web application to locate store*
A simple web-GIS application built using leaflet js library to visualize stores on the map and information as popup. Project Link

DRF-CRUD— *Web application for user and security management*
A simple web-GIS application built using Django-rest-framework library to Token authenticate users and create REST APIs for CRUD operations. Project Link

Analyse professional degree student enrolment v/s university count for Indian states— *Data Analysis using python* (Jun 2020)
To evaluate the trend in higher education over the years based on gender, state, and degree program. Further identify which state requires additional university in the Indian State. Project Link

Atharva— *Concrete canoe competition* (Jun 2019 – Oct 2019)
Designed the hull of 2-meter-long concrete canoe and analysed both hydrostatic and structural robustness using maxsurf and SAP2000. The canoe had an estimated capacity of 200 kilograms while staying afloat. Project Link

Organise records using Excel VBA- *excel, VBA* (July 2019)
User form to organise data on spreadsheet using excel VBA. Add, delete and search functionality included. Project Link

PUBLICATIONS

Feasibility Study of Floating Solar Panels over Lakes in Bengaluru City
Second ASCE India Conference, CRSIDE 2020 (March 2019) [under review at ICE]
Solar output assessment and estimation of evaporation losses for Floating solar Photovoltaic cells.
Publication Link

PROGRAMMING LANGUAGES
Python | JavaScript | PHP | SQL

INDUSTRY KNOWLEDGE
Data Analysis, Remote Sensing Geographic Information Systems, Machine Learning, Web development, Amazon S3, Elastic Search DSL, Docker, leaflet, Openlayers, Geoserver, PostGIS, xarray, rasterio, GDAL, geopandas

TOOLS
Excel VBA | MS Excel | Quantum GIS | ArcGIS | Google earth engine | Adobe InDesign | AutoCAD | MATLAB |

SOFT SKILLS
Documentation, Communication, critical thinking, writing

CERTIFICATION
Excel/VBA for Creative Problem-Solving Specialization
Python for Everybody Specialization
GIS Data Formats, Design and Quality
Imagery, Automation, and Applications
MATLAB programming for numerical computation
Applied Plotting, Charting & Data Representation in Python
Geospatial and Environmental Analysis
Data Analytics with Python (12 Weeks)
Computer Aided Applied Single Objective Optimization (8 Weeks)
Introduction to Data Science in Python
The Data Scientist's Toolbox
Fundamentals of GIS
Building Web Applications in PHP
Applied Machine Learning in Python
Understanding and Visualizing Data with Python
Convolutional Neural Networks in TensorFlow
Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning
SQL for Data Science
Introduction to Machine Learning

LANGUAGES
Kannada, Hindi, English, Marwari

TEST SCORE
Cleared JEE ADVANCED *(*May 2017)
Scored 183/306 with all India rank of 9562 for the joint entrance exam-advanced