SHREYAS R CHANDRASHEKAR

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Education

YEAR	Degree	Institute/School	GPA/%
2024	Ph.D., Information Technology	**Universiteit Gent, Belgium**	**-**
2023	M.Sc., Geoinformatics	Birla Institute of Technology, BIT(Mesra)	8.79
2021	B.Sc., Physics	Birla Institute of Technology, BIT(Mesra)	7.27
2018	Senior Secondary (State Board)	Sri Kumaran Children's Home, Bengaluru	80%
2016	Secondary (ICSE)	Sree Rama Vidyalaya, Bengaluru	86%

Academics

Doctor of Engineering   *(March 2024 - Present)*

"Anthropogenic environmental noise mapping in European natural areas for biodiversity impact assessment"

- Performed Code update of the statistical **sound propagation model** from Python 2.4 to Python 3.x, and included several other parameters such as the Land surface model (terrain) and Meteorological parameters for accurate propagation modelling.
- Using **transfer learning** and **tensor flow**, developed a model to identify wind turbines, roads and
- Running simulations in Flanders Supercomputer for generating sound decibel levels using the Harmonoise Point to Point Propagation model

Master's Dissertation   *(Oct' 2022 – May 2023)*

"Spatio-temporal variation of CO2 and Solar Induced Fluorescence and its relationship with LULC over Southern Karnataka, India."

Conducted research studies using tools encompassing **machine learning**, **deep learning**, **data analysis**, and **statistical** methodologies, primarily implemented in **Python**, with utilization of **Julia** and **R** languages.

- Utilized **Support Vector Machine Regressor** for **satellite** data **gap filling** by integrating spatial and temporal information from **time series** satellite data within the study area.
- Employed **Recurrent Neural Network-Long Short-Term Memory** (RNN-LSTM), **FbProphet**, and **ARIMA models** for **time series forecasting** tasks.
- Implemented Python scripts to preprocess, clean, and automate the analysis of data retrieved from servers, facilitating seamless conversion from **netCDF** to **Geotiff** formats.
- Applied statistical tests, including **Welch's T-test**, to ascertain significance levels in data.

Bachelor's dissertation   *(Jan' 2021 – May 2021)*

"Green House Monitoring and Control System (Using NodeMCU)."

This project utilized sensors such as **soil moisture**, **air quality**, **intensity of light**, **temperature**, **and humidity** all implemented on SoC (**NodeMCU**) to measure parameters for plant growth. Wi-Fi capabilities of NodeMCU was used to upload data to **IoT analytics** website (**Thingspeak**), which was also used to derive summary statistics for **optimization** of growth conditions.

Experience

Technical Advisor & Mentor   *(Aug' 2023 – Mar'2024)*
Dygnify

Advisor to a technical team at the Dygnify. Participated in a project by providing mentorship support to technical team and advising on GIS concepts to develop disaster-based credit system for climate action.

GIS Developer/Analyst (Intern)   *(Jan' 2023 – May 2023)*
Center For Study of Science, Technology and Policy, Bengaluru:

Published an **application in Google Earth Engine** (GEE), the app quantifies and visualizes the Diurnal Temperature Range (DTR) in India, on District level, using **MODIS Terra** data. Gained experience with

JavaScript libraries (**Openlayers**, **Leaflet**, **Mapbox** and **Cesium 3D**), **AWS S3 Bucket** () and **Deep learning** (Using TensorFlow) for **classification** and **forecasting**. Statistical Data on DTR was downloaded month-wise automatically using JavaScript. **Data analysis** and **visualization** was performed using **Python**, and **R.** Created a tool to automatically download n - number of satellite data using GEE.

GIS Developer – Product Lead *(May 20233 – Aug' 2023)*
Engeo Analytics (SENU):
Worked with the founder to set up a start-up in GIS domain. Created a **WebGIS dashboard**, using **JavaScript leaflet** and **Openlayers** library (Created **data pipeline** to fetch **Sentinel 2** images and another to apply **deep learning** on images for **automatic-segmentation** and display in a **WebGIS** page).

GIS and IoT Developer/Analyst (Intern) *(May 2022 – July 2022)*
Indian Space Research Organization, Bengaluru:
Built a System on Chip (SoC), sensor board using various sensors integrated with Atmega328P and NodeMCU module. This SoC was installed at various locations in Bengaluru which collected data on **Temperature**, **Humidity**, **Soil Moisture** and **Air Quality**. This data was used in python for data analysis.
- Created a **website**, using **python** that dynamically collected data from sensors and displayed it in near real time.
- The website was used for visualizing the outputs of **data inferences**.

Business Analyst (Intern) *(Dec' 2019 – Jan' 2020)*
Xcelerator Ninja, Bengaluru:
Learnt hands on about Multicriteria decision making techniques and Analytical Hierarchy process used for **data (pre-)processing**, **data analysis using python** and decision making.

Technical Skills
Programming languages: **Python, C++, JavaScript, and Embedded C.**
Databases: **PostgreSQL (PostGIS), and Cloud Based databases.**
Experience working with **Geoserver.**
Tools: **QGIS, ArcGIS-Pro, Google Earth Engine (Python SDE), ArcMap, ENVI, SNAP, ERDAS IMAGINE, Arduino IDE, MATLAB, and Microsoft Office Tools**
Simulation Software's: **Proteus, Multisim**

Projects (Personal and academic projects)
- https://github.com/shreyas-rc/Basic_CSV_Mapper_using_Folium_Flask
- https://github.com/shreyas-rc/Web_dashboard_leaflet
- https://1616shreyas.users.earthengine.app/view/dtr

Fellowships and Achievements
1) Only one of the two recipients of Prestigious "**Greenko Fellowship**" in India (AUG' 2023).
2) **GATE All India Rank 404** in Geomatics Engineering.
3) **Google User research** fellowship award.

Co-curricular Activities
Social Network Manager *(Feb' 2017 – June 2021)*
Manager and Co-admin of the page @Namma.sandalwood (on Instagram). Through this handle, I have promoted all the major movies released across Karnataka and a few of the major brands (like Burger King).

Hostel Secretary (Hostel-10 BIT, Mesra) *(June 2018 – June 2019)*
As a mess secretary I was tasked with handling the mess bill of every student for a period of one year (two semesters). The total amount handled was roughly a figure of **1.87 crores** in **rupees**.

Volunteer (Rural Kids "Educate Program") *(May 2022 – June 2023)*
Take pride in educating few school going kids in mathematics and science subjects. Two of my students excelled in math with the top rank in the district.

References:
1). Dr. Nilanchal Patel - **npatel@bitmesra.ac.in** (**+91-9431100357),** BIT Mesra, India.
2). Dr. A Pramod Krishna - **apkrishna@bitmesra.ac.in** (**+91-9931577628),** BIT Mesra, India.