

# Sanjog Thapa

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## EDUCATION

### University Of Alabama In Huntsville

Masters In Computer and Information Science

Huntsville, AL

Graduation Date: Dec 2023

## WORK EXPERIENCE

### NASA GHRC DAAC, ITSC UAH

Graduate Research Assistant

Huntsville, AL

Aug 2022 - Present

- Collaborated with NASA scientists to develop an interactive visualization playground, expanding the available and providing researchers with a more comprehensive view of atmospheric science data.
- Implemented a cloud-based FCX Subsetting Tool utilizing a serverless microservice architecture in AWS lambda infrastructure, resulting in a more efficient and streamlined process for subsetting prime instruments data.
- Worked together with a team of researchers to gather user requirements and feedback, resulting in iterative improvements to the visualization tool that implements a 2D histograms of large datasets collected during the NASA GOES-R FIELD CAMPAIGN using a serverless architecture in AWS infrastructure, utilizing dockerized lambdas.
- Created a cutting-edge cloud-based simulation visualization tool using CESIUM, CZML, 3D Tiles, and custom data preprocessing in Python to visually represent the big data collected during NASA OLYMPEX, CPEX-AW, and HS3 field campaigns over a 3D globe.
- Developed and presented a lightning data visualization using NASA Lightning Data in a live notebook environment during UWG meetup, resulting in an increased understanding of the open-source project by attendees.

Gurzu

Software Engineer (Team Lead)

Lalitpur, Nepal

Jan 2019 - Aug 2022

- Led a high-performing team in successfully developing and launching a cutting-edge web solution, enabling seamless integration of social media content into digital signage solution.
- Worked on developing a dynamic web solution utilizing ReactJS, streamlining log analysis and threat identification processes via Kibana.
- Led the front-end development efforts as a pivotal member of the team, driving the creation of a comprehensive management system (Spectrapass) centered around spectrometry for efficient collection and organization of health test sample data.
- Launched the digital signage product in Nepal (Splashnode), introducing custom features catering to the local market and resulting in a significant up to 75% revenue boost for the signage industry.
- Played a key role in the development of a resilient desktop player for a digital signage solution (ISM Connect), employing web technologies within the ElectronJS framework; utilizing implementing IPC for shared data jobs, and AMQP for robust message queuing for uninterrupted operation.

Technorio

Frontend Developer (Internship)

Kathmandu, Nepal

Nov 2018 - Dec 2018

- Played a vital role in the collaborative effort to develop Smart-Doko, an e-commerce platform tailored to meet the unique demands of the Nepali market.

## LEADERSHIP EXPERIENCE

Gurzu

Team Lead

Lalitpur, Nepal

Apr 2021 - Aug 2022

- Orchestrated end-to-end project execution, overseeing backend development using ExpressJS, frontend implementation in ReactJS, and database management with Postgres.
- Demonstrated strong technical acumen by architecting a sophisticated moderation engine from the ground up, effectively curating publicly available Twitter content for display while implementing comprehensive filters.

- Established best practices and coding standards within the team, conducting regular code reviews and providing mentorship to team members to uphold code quality and optimize performance.
- Effectively communicated project milestones, progress, and potential roadblocks to upper management and stakeholders, fostering transparency and alignment with business objectives.
- Enforced agile methodologies, leading daily stand-ups, sprint planning, and retrospective meetings to drive iterative development, efficient task allocation, and continuous process improvement.

## SKILLS

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**Language & Framework :** JavaScript, Typescript, Python, GoLang, C, C++, Java, React, React Native, MERN stack (MongoDB, Express.js, React, Node.js), PERN stack (PostgreSQL, Express.js, React, Node.js), Unity

**Tools:** Terraform, MATLAB, JQuery, Build Tools (Webpack), Testing (Chai, Cucumber), Spreadsheets, Data visualization and analysis tools (Matplotlib, Numpy, Pandas, Seaborn, Scipy, Xarray), AWS (Amazon Web Services), Serverless Architecture (AWS Lambda), Docker, CESIUM, CZML, 3Dtiles, ElectronJs, Message broker (AMQP), GIT