

# Danishjeet Singh

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## EDUCATION

### INDIANA UNIVERSITY

#### Luddy School of Informatics, Computing, and Engineering

Bachelor of Science in Computer Science

Minor: Financial Literacy, Statistics

Bloomington, IN

May 2024

GPA: 3.82

## TECHNICAL & LANGUAGE SKILLS

**Programming Languages:** Python, Java, JavaScript, Scheme

**Markup Languages:** HTML, CSS, LaTeX

**Databases:** MongoDB, PostgreSQL, SQLite

**Frameworks:** React, Tailwind, Bootstrap

## EXPERIENCE

### IU Computer Vision Lab, Indiana University

*Research Assistant*

Bloomington, IN

May 2022 - Present

- Investigating Deep Learning based techniques like CNN's and GAN's for object and image recognition.
- Utilizing various dimensionality reduction techniques to understand the relationship between the size of training datasets and the performance of classifiers through various visualizations.
- Creating GAN's and applying a Variational Auto-encoder using a Class-to-Class approach to further improve the creativity of the generated samples.

### Luddy Student Engagement, Indiana University

*Lead Technical Consultant*

Bloomington, IN

October 2021 - May 2022

- Created and managed the Luddy Living Learning Center(LLC) website by implementing User Testing and actively evaluating feedback to improve the User Experience, while using The WCMS Expression Engine.
- Developed content for the website in collaboration with the Director of Student Engagement to highlight the core objectives of the LLC to increase the user traffic by 150%.

## PROJECTS

### GAN for MNIST Dataset (PyTorch, Matplotlib)

- Prepared and split the MNIST dataset of 60000+ images into training, validation and testing sets.
- Initialized and trained the Generator and Discriminator CNN's to generate and classify generated image results as real or fake.
- Achieved an accuracy of 85% while deploying the Generative Adversarial Network.

### Geodata Visualization Project (Python, JavaScript, SQLite)

- Utilized Google Places API to find the geodata of 200 locations around the globe using Python.
- Constructed a SQLite Database from the geodata acquired from the Google Places API.
- Converted the geodata JSON present in the Database into a JS file to visualize relevant data onto an interactive map.

### Twitter Sentiment Analyser (Python, Tweepy, TextBlob, Pandas)

- Utilized Twitter API to fetch 200+ tweets of popular twitter handles around the globe using Python.
- Constructed and cleaned a Pandas Dataframe and calculated subjectivity and polarity values of tweets using Tweepy
- Performed Sentiment Analysis using the Pattern Analyzer algorithm to further study the relationship of tweets with NLP.

## ACTIVITIES

### Luddy School of Informatics, Computing, and Engineering

*Luddy Student Ambassador*

Bloomington, IN

January 2022 - Present

- Coordinate with the Luddy School's Office of Undergraduate Recruitment towards the creation and promotion of a recruitment strategy for prospective high school students.

### Google Developer Student Club, Indiana University

*Technical Lead/ Core Team Member*

Bloomington, IN

September 2021 - Present

- Learn new Google technologies such as Firebase, GCP, Angular to develop workshops to facilitate learning among 20+ regular participants.