

## Himali Saini

saini155himali@gmail.com | github.com/himalisaini | cse.iitb.ac.in/~himalisaini/ | linkedin.com/in/himalisaini15

### EDUCATION

---

#### Indian Institute of Technology Bombay (IITB), India

Expected: May 2024

Master of Technology (M.Tech) in Computer Science Engineering

(CGPI: 9.25/10)

Courses: Machine Learning, Implementation of RDBMS, Advanced Algorithms, NLP, Medical Imaging.

#### K. J. Somaiya College of Engineering, University of Mumbai, India

June 2022

Bachelor of Technology (B.tech) in Computer Science Engineering

(CGPI: 9.19/10)

Courses: Operating Systems and System Software, DSA, AI, ML, Soft Computing, MEAN, Blockchain, Cloud Computing.

### PROFESSIONAL EXPERIENCE

---

#### Continuum Managed Solution LLP (A ConnectWise Company), Mumbai, India

June 2021 - August 2021

Software Development, Summer Intern | Go-lang, Elastic search

- Developed a high-performance Elasticsearch query generator with advanced filtering, sorting, and pagination capabilities, and reduced the query execution time by developing utilities connecting Go to Elasticsearch including Bulk Insertion and Search API.
- Conducted unit tests, collaborated within a team, and utilized Agile methodologies such as sprints and Jira board.

#### Software Developer, KJSCE, Mumbai, India

August 2020 - Jan 2021

Full Stack Development Intern | Django, Python, SQLite, HTML, CSS, Javascript

- Developed a dynamic timetable generator and staff monitoring system with distinct roles and functionalities tailored to 5 different staff levels.

#### Web Developer, Kohli Media, Mumbai, India

May 2020 - June 2020

Web Development Intern | HTML, CSS, JS, PHP

- Prototyped web pages for the company portal, and created user-friendly UI for the company's digital verification system.

### ACADEMIC PROJECTS

---

#### Deep learning for Image Super-resolution task (CS 694) ( Research under Prof. Suyash Awate )

- Implemented advanced deep learning techniques such as U-Net, ResNet, GANs, and variational auto-encoders to achieve high-quality super-resolution for 4x and 8x upscaling tasks.
- Developed and applied custom perceptual loss metrics to train and evaluate models, resulting in a significant improvement of more than 2 times in perceptual similarity scores.

#### Functional Dependency Support for Postgres (CS 631)

- Implemented insert and update violation checks for functional dependencies in Postgres utilizing the SPI library.

#### Deep Learning for NLP (CS 772)

- Implemented and trained word2vec models from scratch for extracting word embeddings for the analogy task.
- Implemented encoder-decoder architecture using bidirectional LSTM for POS tagging task, with an accuracy of 98%.

#### Neural Style Transfer (CS 725)

- Implemented Neural Style Transfer using two different deep learning techniques.
- CNN: Extracted feature maps using VGG19, and plotted loss curves for various subsets of feature maps to analyze content and style reconstruction. Used parameter tuning to find the best style and content-weighted image.
- CycleGAN: Learnt to map between input and output images using unpaired datasets (style and content images).

#### Web Scraping for Dynamic Price Analysis (CS 699)

- Scraped product information for trending electronic items for a period of one month and performed data visualization.
- Created a web app to search for products to show prices and review comparisons between Amazon and Flipkart.

### TECHNICAL SKILLS

- 
- Programming and Scripting: C, C++, Python, Java, Bash, GO, Flutter, Javascript, PHP, HTML, CSS
  - Tools and Libraries: SQL, OpenCV, Bash, Django, PyTorch, TensorFlow, Keras, MATLAB, Bootstrap, Latex, Inkscape

### EXTRACURRICULAR ACTIVITIES

- 
- Secured AIR (ALL INDIA RANK) 10 in GATE (Graduate Aptitude Test) CS 2022
  - Served as a Teaching Assistant (TA) for the course CS 302 (Implementation of Programming Languages Theory and Lab)
  - Secured Rank 1 in Kaggle leaderboard for deep learning-based classification task (from scratch) held as a part of CS 725
  - Secured Rank 1 in Chefpreneur'19 (Cooking and Entrepreneurship competition)