

BHUMIKA DINESH SHETTY

1059 70th st, Brooklyn, New York - 11228

Email: bds9746@nyu.edu | Phone: +1 929 702 4696 | LinkedIn: /in/bhumika-shetty-531b451bb/ | Portfolio: https://bhumika-shetty.github.io/

TECHNICAL SKILLS

Programming: Python, Java, React, SQL, Shell, CUDA

Software & Tools: Pytorch, OpenCV, Docker, Linux, MongoDB, AWS, Huggingface,

Relevant & Courses: Deep Learning, ML, Data Structures, Computer Vision, DBMS, Operating Systems

EDUCATION

New York University

Sep 2024

Masters in Computer Engineering

BMS Institute of Technology and Management, Bengaluru

in Computer Science

Aug 2018 - May 2022 Bachelors

CGPA: 3.8

WORK EXPERIENCE

1. NeuroPixel.AI, Bengaluru

July 2023 - August 2024

Deep Learning Engineer

- Fine-tuned Meta's Segment Anything Model (SAM) for garment segmentation, improving segmentation accuracy by 45%.
- Trained and deployed ControlNets for skin and hair texture generation using Stable Diffusion, enhancing realism in virtual try-ons.
- Developed a Stable Diffusion-based identity preservation workflow, reducing model swap errors by 60%.
- Designed and implemented a super-resolution module using SRGAN & PyTorch, enhancing image quality for e-commerce applications.
- Published a patent (202341060944) as a primary author on AI-driven human image modification.
- Collaborated with Landmark Group, Decathlon, and Myntra, leading pilot implementations and optimizing AI models for commercial use.
- Worked directly with the CTO to manage project timelines and team deliverables.

2. NeuroPixel.AI, Bengaluru

August 2022 - June 2023

Software Development Engineer

- Built Dockerized ML pipelines, reducing deployment time by 60% and improving model scalability.
- Optimized CUDA-based parallel processing, accelerating the inference speed.
- Enhanced pre-processing workflows using OpenPose, DensePose, and CIHP, improving data efficiency.
- Developed a MERN stack-based cataloging platform, streamlining internal data management.

3. NeuroPixel.AI, Bengaluru

February 2022 - July 2022

Software Engineering Intern

- Built web scraping pipelines to collect and preprocess training datasets for ML models.
- Developed image processing scripts using OpenCV & PIL, improving model input quality.

PROJECTS

1. Agritech and Swadeshi:

The project aims to empower India's rural sector through four key platforms: an exclusive e-commerce site, a bidding portal to eliminate middlemen, a blog to highlight rural culture, and an educational platform along with Mannat, a website dedicated to supporting nonprofit organizations (MERN stack). Also developed a Machine Learning-based solution for precision agriculture (9 functionalities) under Agritech.

2. ATS (Automated Ticketing System)

Created a facial recognition model using Facenet as the base to automate the ticketing process in the metros. Used MTCNN for face and landmark detection and OpenCV for image processing. Also, the Aadhar integration authentication process to increase safety measures.

Patents and Publications

• "System and Method for Modifying a human image using machine learning models"

Filed under NeuroPixel.AI Labs | 11 September 2023

Co-authored patent on AI-driven human image modification, application number 202341060961

• "Smart Ticketing System for Smart Cities"

Filed under BMSIT&M | June 2021

Patent on a facial recognition-based metro ticketing system, application number 202141026348 A