

Work Experience

AI Engineer, BrainCraft Ltd, Dhaka, Bangladesh, December 2022 - Present

- Engineered generative models for image creation in [Cartoon.ai](#), propelling it to top-grossing status.
- Collaborated intensively in developing and deploying a semantic image segmentation model, elevating user experience and delivering precise segmentation functionality to a user base exceeding 10 million.
- Implemented a comprehensive system for text-to-image and text-to-gif generation using stable diffusion models and Python, showcasing proficiency in advanced machine learning techniques and image processing algorithms.

Software Engineer, BrainCraft Ltd, Dhaka, Bangladesh, January 2022 - November 2022

- Planned and implemented an Image to Video making module using OpenGL ES and MediaCodec API for the [GIFMaker](#) and [Add Music to Video](#) android apps, resulting in over 250,000 downloads on the Google Play Store.
- Developed a core video decoder/encoder module using raw C++ libraries and the Android NDK, resulting in a remarkable 10x performance enhancement on lower-end devices.
- Managed and guided a team of four members in the successful development of a feature-rich Slideshow app, leveraging Android Core functionalities, MVVM architecture, custom rendering techniques, and advanced video encoding/decoding technologies.

Software Engineer, LiiLab, Sylhet, Bangladesh, January 2021 - December 2021

- Architected and Programmed the [Intro Maker](#) app, leveraging Canvas and Native Android APIs to create stunning intros. Achieved an impressive milestone of over 100k downloads on the Play Store.
- Optimized [GkQuiz's](#) rank list functionality using Firebase Realtime Database and Firestore, achieving a remarkable 4x performance boost. Attracted over 250k users on the Play Store.

Technical Skills

- Computer Vision and ML : Pytorch, CNN, RNN, transformer, NumPy, Scikit-learn, OpenCV, Matplotlib, Pillow.
- AI Tasks : Image - classification, Segmentation, enhancement, Colorize, Upscale, Faceswap. Image Generation - Inpainting, Outpainting, text to image, Image to image, Diffusion Models, Image to Video, Video to Video with SVD.
- Proficient knowledge in Algorithms, Data Structures, Dynamic Programming, Number Theory, Probabilities.
- Utilized RenderScript and OpenGL ES for graphics rendering.
- Solved over **2200+** Data Structure & Algorithmic problems.
- Experienced in Agile Environment, MVVM and MVC Architecture, Github, and Bitbucket.
- Programming Languages: **Python, C++**, Java, Kotlin, Swift.
- Others : Docker, fastapi, gradio, MySQL, SQLite

Education

Bachelor of Science in Mathematics

Shahjalal University of Science And Technology, Sylhet, Bangladesh, June 2020

Competitive Programming Achievements

Competitive Programming & Contests, November 2015 - August 2020

- Expert, Rating **1767** in Codeforces. ID : [stsaiikat](#)
- 4 star, Rating 1844 in CodeChef. ID : [thestsaiikat](#)
- Top **1.1%** in Leetcode. ID : [sunipun](#)
- Participated in Code Jam 2019 Round 1B, 2017 - 2019 ACM-ICPC Dhaka regional preliminary contest

Projects

- [Video To Audio Converter - Android app](#)
Android app to extract high-quality audio from videos, built with Java, Kotlin, FFmpeg and MediaCodec
- [Classification Made Easy](#)
To make classification training, validation and test easier with different architecture with just a few lines of code.
- [Semantic aware Image search](#)
Developed an image search engine with semantic meaning of an image utilizing vectordb and clip interrogator.

Voluntary Activities

- Moderator & Trainer, Euclid Programming Club, SUST, January 2017 - December 2020
Conducted over 30 programming workshops, training 200+ students in competitive programming
- Admin & Program coordinator, Shuddho Social Organization, Sylhet, Bangladesh, July 2015 - July 2019