

Node-Based Generative AI Workflow for Automated Image Post-Production

by

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*Internship report (CSE4099-A) submitted in partial fulfillment of the
requirements for the degree of*

Bachelor of Science in Computer Science and Engineering

Under the supervision of

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
UNIVERSITY OF LIBERAL ARTS BANGLADESH**

SPRING 26

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DECLARATION

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I declare that this internship report entitled *Node-Based Generative AI Workflow for Automated Image Post-Production* is the result of my own work except as cited in the references. The internship report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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CERTIFICATE

This is to certify that the internship report entitled **Node-Based Generative AI Workflow for Automated Image Post-Production**, submitted by **Jannatul Ferdous Badhon** (Student ID: 212014035) is a undergraduate student of the **Department of Computer Science and Engineering** has been examined. Upon recommendation by the examination committee, we hereby accord our approval of it as the presented work and submitted report fulfill the requirements for its acceptance in partial fulfillment for the degree of *Bachelor of Science in Computer Science and Engineering*.

Raihan Kibria, Senior Lecturer (Academic)

University of Liberal Arts Bangladesh

Mohammad Raihan, Founder, CEO (Industry)

Blackfox Limited

Place: Dhaka

Date: April 21, 2026

ACKNOWLEDGEMENTS

I would like to express my deep and sincere gratitude to my supervisor, , for giving me the opportunity to conduct this internship and providing invaluable guidance throughout this work. His dynamism, vision, sincerity and motivation have deeply inspired me. He has taught me the methodology to carry out the work and to present the works as clearly as possible. It was a great privilege and honor to work and study under his guidance. Also, I would like to thank the other employees of for their help and cooperation during my practice time.

I am greatly indebted to our honorable teachers of the Department of Computer Science and Engineering at the University of Liberal Arts Bangladesh who taught me during the course of our study. Without any doubt, their teaching and guidance have completely transformed us to the persons that we are today.

I am extremely thankful to my parents for their unconditional love, endless prayers and caring, and immense sacrifices for educating and preparing me for the future. I would like to say thanks to my friends and relatives for their kind support and care.

Finally, I would like to thank all the people who have supported me to complete the Internship directly or indirectly.

Jannatul Ferdous Badhon

University of Liberal Arts Bangladesh

Date: April 21, 2026

Dedicated to
my loving Mother

– *Jannatul Ferdous Badhon*

EXECUTIVE SUMMARY

This is a report of an internship experience in the design and development of an AI-based virtual product modeling system at Blackfox Limited. The main aim of this project is to automate image post-production of high quality images of products with realistic human models, thus minimize the use of conventional photoshoots, professional models, and manual editing of the images.

The system is trained with Generative Artificial Intelligence methods, especially diffusion-based image generation models. Such tools as **ComfyUI** are used to build a modular, node-based workflow, which combines various components, such as **Stable Diffusion, ControlNet, LoRA, and Variational Autoencoders (VAE)**. The system takes product images as an input and processes them in multiple steps, such as requirement analysis, image preprocessing, model set-up, image generation with a diffusion model, integration of products with inpainting, and final enhancement with post-processing methods.

One of the main characteristics of the system is that it is able to preserve structural consistency and realism and precisely position the products on the human models generated by AI. The pose and structure are directed by **ControlNet**, and the consistency of style across outputs is provided by **LoRA**. The resulting images are then further enhanced with upscaling and face restoration algorithms to achieve professional quality.

This system is very cost effective, minimized turnaround time, and improved scalability to clients who need product visualization in large quantities. It also shows how generative AI can be practically applied in the digital marketing and e-commerce industries.

In general, the internship was a hands-on experience in the area of realizing AI-based systems, optimization of workflows, and practical problem-solving, which developed with technical and professional skill.

Keywords: Generative AI, Virtual Modeling, Image Post-Production, ComfyUI, Stable Diffusion, ControlNet, AI Automation, LoRA.

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Chapter 1

Introduction

1.1 Introduction

The rapid development of **Artificial Intelligence (AI)** has made generative AI a powerful tool for transforming digital content. High-quality visuals are becoming more and more necessary in digital marketing, fashion, and e-commerce to increase consumer engagement and brand value. The traditional way of creating images is through professional photoshoots, human models, and manual editing, which can be costly, time-consuming, and not easily scalable.

To overcome these limitations, AI-based image generation techniques are being used to automate and simplify the creation of visual content. This internship project focuses on developing an AI-driven **virtual modeling and image post-production** system using generative AI. The system will generate naturalistic human models with products given by the clients like clothing, footwear, and accessories, which will no longer require real models and will reduce manual workload. This method improves efficiency, scalability and visual consistency in digital pipelines through the use of advanced Generative AI tools and **node-based workflows**.

1.2 Objective of the internship report

The key aims of this internship report are:

1. Develop and learn how Generative AI can be used in **image post-production and virtual modeling**.

2. To create and deploy a **node-based generative workflow** to visualize products automatically.

3. To use Stable Diffusion or other AI models like ControlNet, LoRA, and inpainting to generate realistic models and place products.

4. To assess the efficiency of AI-driven automation to save the manual work and enhance visual quality.

5. To have a hands-on experience in the implementation of AI technologies in a professional production setting.

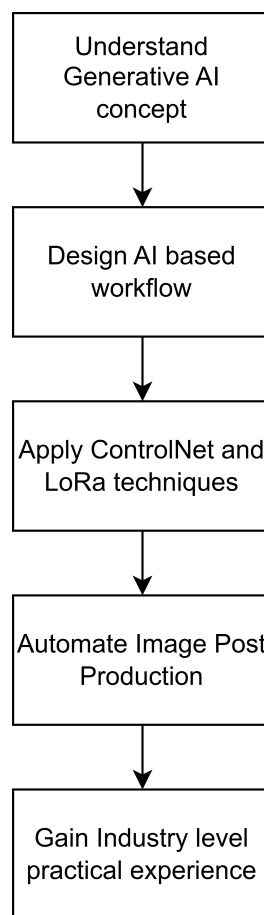


Figure 1.1: Objectives of the Internship

Chapter 2

Background

The traditional methods of product image development are based on professional photoshoots, human models, and post-production. The large-scale content production is not easy due to the time, financial input, and skilled human resources needed. In addition, manual processes creates inconsistency in quality and slow down the production cycles. The latest developments in generative AI and diffusion-based models have opened up new opportunities into automated image generation. Using AI-driven processes, brands can create realistic virtual models and automate the work on complicated editing. This project aims to design a system that automates virtual modeling and image post-production to fill limitations of traditional approaches.

Aspect	Description
Traditional Method	Uses human models, photoshoots, and manual editing
Problems	High cost, time-consuming, difficult to scale
Technological Shift	Adoption of Generative AI in image processing
Proposed Approach	AI-based virtual modeling and automation

Table 2.1: Background Overview

Chapter 3

Scope of Work

3.1 Generative AI implementation

The scope of this internship project focuses on the following:

1. Learn and practice Generative AI methods for image post-production and virtual modeling.
2. Create a workflow powered by AI to create realistic, staged human models.
3. Process images of products provided by clients, e.g., clothes, jewelry, and shoes.
4. Create a pipeline with ComfyUI and Stable Diffusion as a node.
5. Apply **ControlNet** to provide pose and structural guidance.
6. Use **LoRA** to ensure that the models appear and look the same.
7. Use **inpainting methods** for the correct placement of products on models.
8. Apply AI-enhanced image processing with upscaling and face restoration.
9. Experiment with different models and parameters to optimize output quality.
10. Be consistent, efficient, and scalable in image generation.
11. Covers only AI-based virtual modeling and post-production, but not physical shoots.

3.2 Support to Team and Professional Development

The internship experience at **Blackfox Limited** was engaging as I was actively involved in the team and yet developed my professional and technical skills. I also

Task Area	Activities
AI Implementation	Use of Stable Diffusion and ComfyUI
Product Processing	Handling clothing, jewelry, footwear images
Workflow Design	Node-based pipeline creation
Techniques Used	ControlNet, LoRA, Inpainting
Enhancement	Upscaling and face restoration
Limitations	No physical photoshoot involved

Table 3.1: Scope of Work

worked with the production and development groups to assist in the deployment of an AI-based virtual modeling system. My task was to help with the workflow design with **ComfyUI**, store model resources, test the output of the image generation and find out where improvements can be made in the quality and efficiency aspect.

I contributed to the team through discussions concerning the needs of the clients, the knowledge of the project objectives and assisted in aligning the AI-generated products with the standards of expectation. I also helped to troubleshoot problems in model execution, parameter optimization, and to facilitate the workflow. This team work experience enabled me to learn the dynamics of projects in the real world, coordination of teams, and problem solving techniques.

Professionally, this internship has greatly enhanced my understanding of Generative AI, especially diffusion models, methods of image processing, and automation using AI. I was able to work with tools like ComfyUI and gain a better conceptual grasp of concepts like latent space, inpainting, ControlNet, and LoRA.

In addition, I developed my soft skills, such as communication, teamwork, time management, and adaptability. Working within a professional environment helped me to close the divide between theory and practice. On the whole, this experience helped me develop as a professional and industry-prepared person.

Chapter 4

Internship Activities

4.1 Introduction of the Organization- Blackfox Limited

This section provides an overview of Blackfox Limited, including its background, services, scope of operations, and organizational structure. It highlights the key information about the company's facilities, management, and market position, giving a clear understanding of the professional environment in which the internship was conducted.

Blackfox Limited is a growing image post-production and digital services company established in 2016. It started its journey with a small team of five skilled graphic designers. Over the years, the company has expanded significantly and now consists of more than 80 dedicated and creative professionals. The company mainly provides services such as photo editing, graphic design, and web development to clients from Europe, the USA, and Australia.

The company is built on the core values of quality, innovation, and customer satisfaction. Blackfox Limited has become a trusted partner for industries such as fashion, e-commerce, photography, and retail branding. It offers a wide range of services including background removal, image retouching, shadow creation, masking, and product enhancement. These services are delivered efficiently through a structured workflow supported by a three-step quality control process.

Under the leadership of CEO Mohammad Raihan and Director Tanvir Mahedi Shakkhor, Blackfox Limited has established itself as a reliable outsourcing company. The organization continues to strengthen its position in the global digital services market by ensuring high-quality output, 24/7 client support, and the adoption of modern technologies such as Adobe Creative Suite.



Figure 4.1: Balckfox

4.1.1 Location and Facilities of Offices

Blackfox Limited operates through multiple office locations to ensure smooth workflow management, effective team coordination, and efficient communication with international clients. These offices play a significant role in supporting production activities and managing global operations.

Headquarters and Development Center (Dhaka, Bangladesh): This is the main operational hub of the company, where most of the design, development, and production activities are carried out. It serves as the central point for project execution, quality assurance, and internal management.

Location: Road-11, Adabor, Dhaka-1207, Bangladesh

Contact: (+88) 019 24 482 868

Email: info@blackfoxdigital.com.bd

Branch Office: (Magura, Bangladesh): This office supports production operations and helps distribute workload among different teams to maintain efficiency and ensure timely delivery.

Location: Magura Tower, Magura, Bangladesh

International Office (Australia): The international office manages global client communication, business development, and client relationship management, especially for overseas clients.

Location: 8 Sax Pl, MacGregor ACT 2615, Australia

Contact: (+61) 414 045 232

Email: james@blackfoxdigital.com.bd

Website: <https://blackfoxdigital.com.bd>

4.2 Work Accomplishment

Blackfox Limited is an **image post-production company** that offers high-end retouching services across European countries. The services include background removal, clipping path, color correction, retouching, and optimization of product images. The company has a dedicated production team that deals with large amounts of client work without compromising quality.

As the need to find more and cheaper solutions, Blackfox Limited is in the process of studying and applying Generative AI technologies to improve its production process. The purpose of integrating AI tools is to automate repetitive processes, decrease operational costs, and decrease time spent on production. This not only enhances internal efficiency but also offers a great benefit to clients since it is able to produce high-quality productions within a shorter period of time at a lower price.

In my internship, I was employed in the field of **AI-assisted image generation and post-production**, using such tools as **ComfyUI** and **Stable Diffusion** to facilitate the creation of automated virtual modeling solutions. The following were the activities that I did and learned during my internship period:

- Observed:
 - The general process of image post-production in the professional setting.
 - The analysis of client requirements and their visualization.
- Experienced:
 - Generative AI applications, e.g. ComfyUI.
 - Working with product images in real life and the expectations of clients.
- Performed:
 - Set up and configured AI environments using Google Colab.
 - Constructed node-based workflows to generate images with Stable Diffusion.
 - Tried ControlNet, LoRA, and inpainting techniques.

- Created model images of AI-generated models in client products.
- Learned:
 - Practical implementation of Generative AI in image post-production.
 - Timely engineering and parameter optimization (steps, CFG, sampler).
 - Optimization of workflow to achieve enhanced quality and efficiency.
- Understood:
 - The disparity between theoretical AI learning and real-life implementation.
 - Difficulties in ensuring consistency, realism, and product accuracy in AI-generated images.
- Identified Gap:
 - Whereas theoretical learning is concerned with model concepts, in reality, it is necessary to cope with the constraints of the GPU, model choice, and optimization of the workflows.
 - Practical production needs speed, consistency, and quality which require fine-tuning of theoretical knowledge.

4.3 Challenges Faced

In the internship, I faced the following challenges:

- Limited GPU resources slowed down model training and image generation.
- Challenges in downloading and managing **large AI models** in the clouds.
- To ensure a consistent model of AI-generated output.
- To place accurate products on AI-generated models using inpainting techniques.
- Understanding complex node-based workflows in ComfyUI initially.

4.4 Solutions

- Used **Google Colab** for accessing GPU resources.
- Reconfigured to lightweight models and tuned parameters.
- Practiced the workflow and tried various methods.
- Improved **prompt engineering** and model selection to achieve better results.

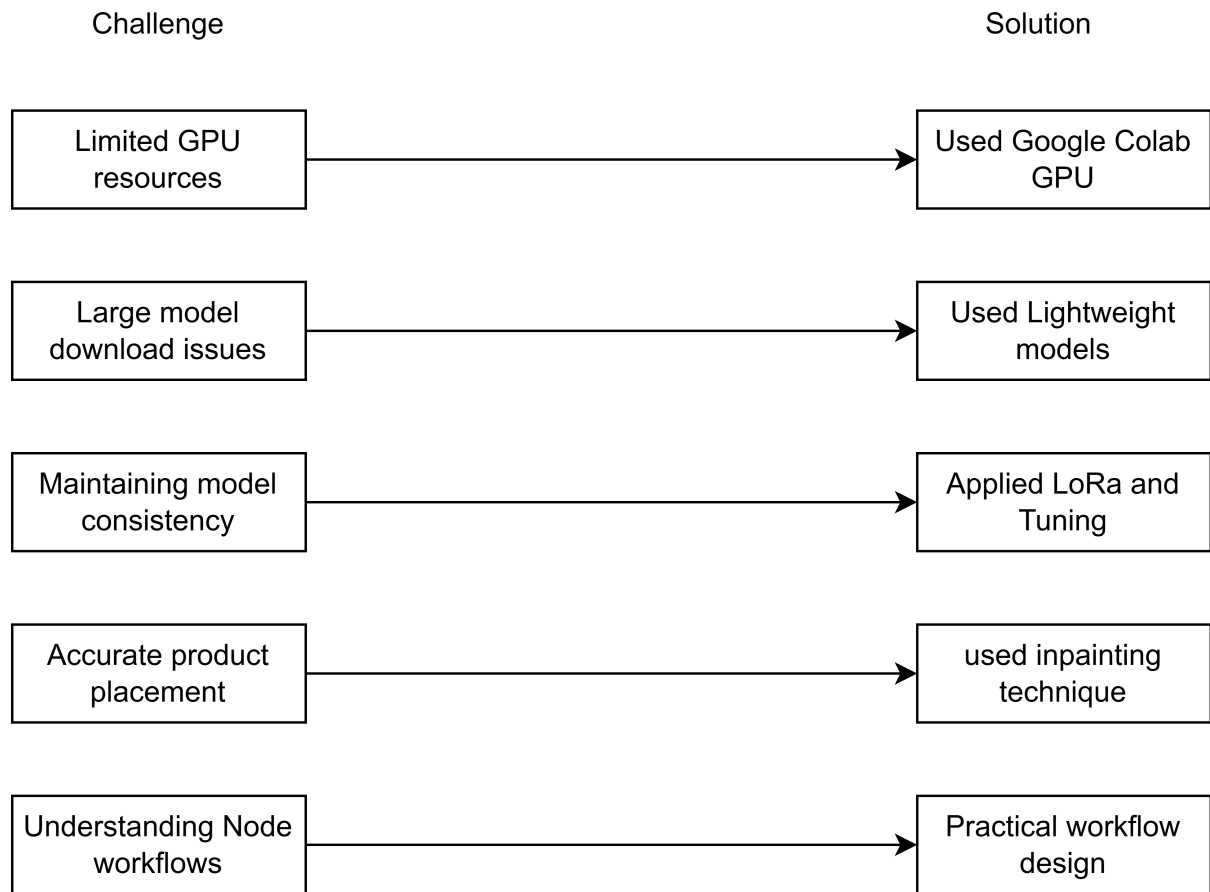


Figure 4.2: Challenges and Solutions

Chapter 5

Methodology

The proposed system is created in a **multi-stage pipeline** that integrates Generative AI techniques for virtual modeling and automated image post-production. The methodology guarantees proper visualization of the products, uniformity, and qualitiful output.

1. Requirement Analysis

This starts with the client requirement analysis. This involves the product type (clothing, jewelry, footwear), the model image appearance (gender, pose, style), background, and output quality. This step helps to choose the right models, prompts, and workflow setups.

2. Input Acquisition

Product images are collected from clients. These pictures become the main input to the system and are standardized in terms of format and resolution.

3. Pre-processing and Segmentation

For pre-processing, the input images need to resize, clean, and masking. The background removed and the extraction of the region of interest (ROI) is performed to prepare the image to be integrated.

4. Model Initialization

The system loads the necessary AI models, such as:

- **Stable Diffusion** checkpoint (for image generation)
- **VAE (Variational Autoencoder)** - to latent decoding
- **CLIP Text Encoder** (so that it can be understood immediately)

Other models are also initiated like **ControlNet** and **LoRA** to promote control and consistency.

5. Workflow Design and Setup

ComfyUI is used to create a node-based workflow. Various nodes are interconnected to perform certain functions like **text encoding, sampling, inpainting, and decoding**. The most important parameters, like **steps, CFG scale** and type of sampler, are optimized to achieve the best image.

6. Latent Space Image Generating

Text prompts are encoded into embeddings using **CLIP**. The latent space is initialized with a random noise and refined with the **KSampler (diffusion process)** iteratively. The **step** produces a foundation image of a real human being.

7. Structural Control (ControlNet)

ControlNet is used to control the pose, structure, or depth of the generated model. This ensures that the created human model follows to a realistic body structure.

8. Product Integration (Inpainting)

The product is placed on the generated model by inpainting methods. A masked area is determined and the product image is incorporated in the masked area while maintaining the correct alignment, texture, and lighting consistency.

9. Style Consistency (LoRA)

LoRA models are used to ensure consistent facial features, body structure, and style in multiple generated images. This guarantees consistency in the virtual model.

10. Image Reconstruction and Decoding

The latent representation is processed and turned into a final image by the VAE decoder, which yields a high-quality **RGB**.

11. Post-processing and Enhancement

The created image is additionally refined with the help of AI-powered methods:

- Higher resolution by upscaling.
- Restoring faces to improve facial features.
- Sharpening and colour correction.

12. Evaluation and Delivery of the output

The final image is evaluated on the basis of realism, the accuracy in product placement, and the overall quality. Once validated, the high-resolution output is sent to the client.

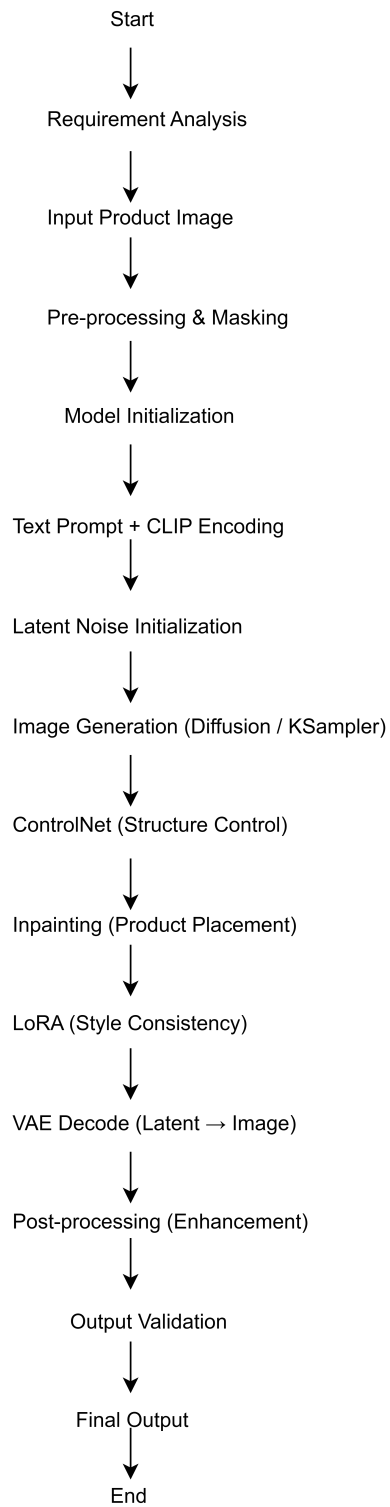


Figure 5.1: Methodology

5.1 System Architecture

The proposed AI-based virtual product modeling system architecture is a scalable and modular pipeline that incorporates various Generative AI components to create and improve images automatically.

The architecture starts with the input stage whereby, the input of product images by the clients is collected and normalized in regards to format, size and resolution. Such images are then sent to the pre-processing module where backgrounds are removed, images resized, normalized and masked to leave the region of interest (**ROI**) alone.

After pre-processing, the data is sent to the core generation module. **Stable Diffusion** is the image generation model used in this module. The textual cues are followed by textual prompts that are encoded by **CLIP text encoder** and assist the system to decode semantic instructions including model type, pose and style. The noise representation is a latent representation that is initialized and refined by a diffusion sampling process (KSampler).

ControlNet is made part of the architecture to ensure structural accuracy and realism. It regulates pose, body structure and spatial alignment of the generated model. As well, **LoRA (Low-Rank Adaptation)** is used to retain the style consistency such as facial features, and overall appearance among the outputs generated.

Product integration is the role of **inpainting module**. The product image is precisely positioned on the created human model using masked regions maintaining texture, alignment, and lighting consistency.

Once the image is generated, the latent output is decoded into a high-resolution image with the help of a **Variational Autoencoder (VAE)**. The post-process module then takes as input the image that is decoded and performs post-processing tasks such as upscaling, face restoration, sharpening of image and color correction to improve general visual quality.

Lastly, the output validation module will make sure that the created image is of good quality in terms of realism, product accuracy, and aesthetic appeal and then present the end output to the client.

This modular design guarantees flexibility, scalability and quality generation of output but has a large reduction of manual effort, cost and production time.

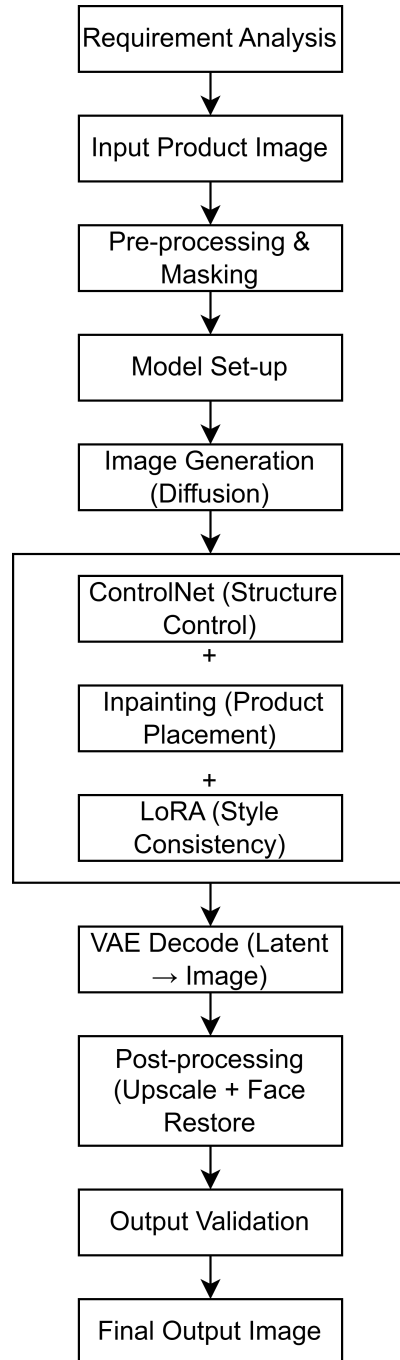


Figure 5.2: System Architecture

Chapter 6

Analysis and Findings

6.1 Confidentiality Considerations

This was a project carried out on a formal Non-Disclosure Agreement (NDA) basis with the client organization. Consequently, some information, such as the images of the original products, brand names, and specifics about a particular client, cannot be revealed publicly.

Sanitized and anonymized examples have been used throughout this report to make certain that there is clarity in describing the workflow of the system. Such representations are a true reflection of the technical process, and they are also very strict in terms of the rules of confidentiality.

6.2 Results

The implementation of the AI-based virtual modeling system demonstrated that Generative AI can effectively automate image post-production tasks. The system successfully generated realistic human models wearing client-provided products such as clothing and accessories.

The use of **Stable Diffusion** through **ComfyUI** enabled flexible workflow design and customization. Techniques such as **ControlNet** improved pose accuracy, while inpainting ensured proper product placement. **LoRA** contributed to maintaining consistency in model appearance across multiple outputs.

The results showed that AI-generated images achieved a high level of visual realism when appropriate parameters and models were used. Additionally, the

system significantly reduced manual effort and production time compared to traditional photoshoot-based methods. However, performance was dependent on GPU availability, and some outputs required parameter tuning for optimal quality.



Figure 6.1: Raw clothing picture



Figure 6.2: Ghost Mannequin



Figure 6.3: Virtual Model and Image post-production

6.3 Learning and Development

During the internship, I gained both technical and practical knowledge in the field of **Generative AI and image post-production**.

- Developed a strong understanding of Stable Diffusion and diffusion-based models
- Learned to use ComfyUI for node-based workflow design
- Gained experience in prompt engineering and parameter tuning
- Understood the use of ControlNet, LoRA, and inpainting techniques
- Learned how to optimize workflows under limited GPU resources
- Improved problem-solving skills through debugging and experimentation
- Understood the gap between theoretical knowledge and real-world application

This internship enhanced my ability to apply AI technologies in a professional environment and improved my technical and analytical skills.

6.4 Tools and Technology

The following tools and technologies were used during the internship:

- Software Platforms
 - ComfyUI (node-based AI workflow tool)
 - Stable Diffusion (Generative AI model)
 - Google Colab (cloud-based GPU environment)
 - Python (for execution and environment setup)
- Models Techniques
 - ControlNet (for pose and structure control)
 - LoRA (for style and consistency)
 - Inpainting (for product placement)
 - VAE (for image decoding)
- Hardware
 - GPU (Tesla T4 via Google Colab)
 - Personal computer for workflow design and testing

These tools enabled the development of an efficient AI-based image generation and post-processing system.

6.5 User Guideline

The developed system can be used to generate AI-based model images by following these steps:

Step 1: Input Preparation

- Upload the product image (e.g., clothing or accessory)

Ensure the image is clear and properly cropped

Step 2: Load Workflow

- Open ComfyUI
- Load the predefined workflow for virtual modeling

Step 3: Configure Settings

- Select the appropriate model (checkpoint)
- Enter prompt and negative prompt
- Adjust parameters such as steps, CFG scale, and sampler

Step 4: Run Generation

- Execute the workflow
- The system will generate a model image with the product applied

Step 5: Post-processing

- Apply upscaling and face restoration
- Review the output for quality and accuracy

Step 6: Output

- Save the final high-resolution image
- Deliver to client

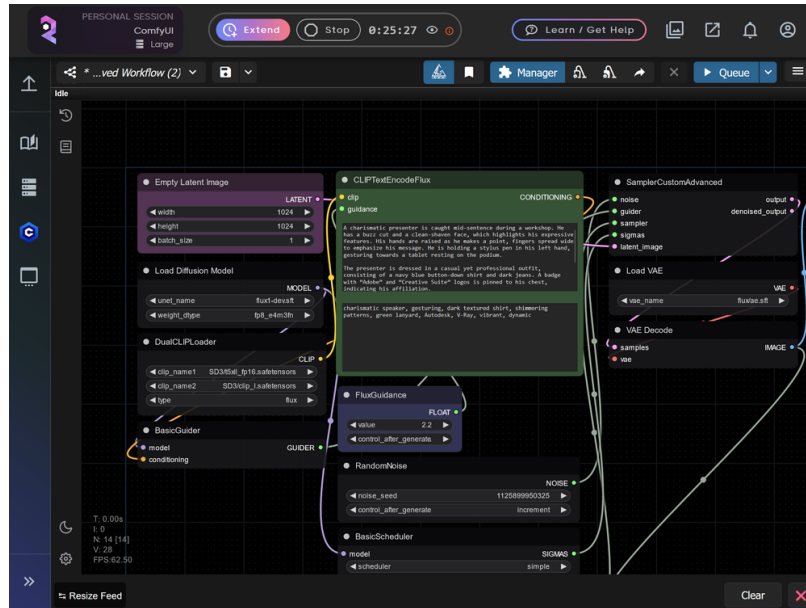


Figure 6.4: ComfyUI Interface

6.6 Impact of the Internship

The Blackfox Limited internship experience was very influential in my professional and technical growth. It gave me the chance to practice theoretical knowledge in a real-life setting, especially, the sphere of Generative Artificial Intelligence and image processing.

Technically, I acquired practical knowledge of the state-of-the-art AI tools and frameworks, including ComfyUI, Stable Diffusion, ControlNet, and LoRA. I have gained a clear idea of image-generating through diffusion, manipulation of latent space, and AI-controlled processes. This experience helped me improve my design and implementation of automated systems of virtual model development and visualization of products.

Another aspect of the internship that enhanced my problem-solving capabilities was the optimization of workflows, enhancement of image quality, and realistic placement of products. I also got to know how to deal with actual client needs and this enhanced my skills in critical thinking and focus.

Professionally, teamwork enhanced my communication skills, collaboration and time management skills. I was better able to adjust to dynamic work environments and gained the skills of achieving deadlines in a production-based environment.

Besides, this internship has equipped me with knowledge about the industry practices such as automation of workflow, quality control mechanisms and client-focused service delivery. It made me more confident in dealing with intricate systems and strengthened my belief that I want to work in the sphere of Artificial Intelligence and Generative AI technologies.

In general, the internship experience was positive and long-term in its contribution to the academic study, technical knowledge, and professional aspirations.

Chapter 7

Conclusions and Recommendations

7.1 Conclusion

The Blackfox Limited internship was considered an incredibly valuable learning experience as it gave me a hands-on experience of applying Generative AI to the real business environment. The main aim of this internship was to create an AI-based virtual modeling system that produces realistic human models with the products provided by clients, without having to go through photoshoots.

This project helped me to close the gap between theory and practice. I was able to get practical experience in the use of modern AI tools and frameworks like ComfyUI, Stable Diffusion, ControlNet, and LoRA. These technologies allowed me to learn more about such advanced concepts as diffusion-based image generation, latent space processing, and AI-based image editing.

A production-oriented environment helped me to develop problem solving skills, technical skills and attention to detail. I also gained a better insight into the automation of workforce, the design and methods of optimization to achieve better output quality and efficiency.

Working in a team enhanced my communication and teamwork skills and addressing real client requirements, enhanced my critical and quick adaptation skills. On the whole, this internship has helped me to grow professionally and develop a greater interest in becoming a professional in the field of Artificial Intelligence and Generative AI systems.

7.2 Limitations

The internship program was fairly brief, so it was not possible to get into the depths of knowledge of AI model training and fine-tuning methods. There was limited access to high-end computing (GPU, VRAM), which impacted the exploration of large-scale models and complex workflows. The company confidentiality policies limited some of the proprietary workflows and production pipelines. The system was primarily aimed at image generation and hence not much was done on performance optimization and scalability to large-scale deployment. Because of time limitation, not all the testing on various product lines (e.g., jewelry, footwear, clothing varieties) was completed.

7.3 Recommendations

- Conduct organized onboarding and training of Generative AI tools like ComfyUI and diffusion models to future interns.
- Upgrade to more efficient GPU infrastructure to enable more rapid processing and experimentation on models.
- Standardize a workflow template on various types of products to enhance uniformity and efficiency.
- Introduce methods of automated evaluation of quality to determine realism and product alignment of generated images.
- Add the system to enable video creation and dynamic virtual model in the future.
- Promote documentation and team knowledge sharing to enhance collaboration and maintenance of systems in the long term.

Chapter 8

Acknowledgments

I would also like to thank Allah Almighty with all my heart and patience, and capabilities to complete my internship.

I am extremely grateful to Blackfox Limited to have offered me a chance to work as an intern. This experience has enabled me to have a good exposure to a real world professional environment particularly in the area of software development and digital services.

I would like to express my sincere gratitude to my **industry supervisor, Mohammad Raihan**, who has provided me with the guidance, support, and useful advice all along the internship period. His mentoring was very helpful in making me aware of professional standards and greatly enhanced my technical and problem-solving abilities.

I also thank everyone in my team at Blackfox Limited to be cooperative, supportive, and to provide me with a friendly and team working environment.

Moreover, I want to thank my **academic supervisor, Raihan Kibria**, and his guidance, encouragement, and supervision throughout my internship. He supported me to remain focused and write my report successfully.

Lastly, I want to give my parents and friends my unending gratitude and support, motivation, and encouragement on this path.

I would like to thank all of you who helped to make my internship an interesting and meaningful learning experience.

Appendix



Date: 15/01/2026

Jannatul Ferdous Badhon
Student ID: 212014035
Department of Computer Science and Engineering (CSE)
University of Liberal Arts Bangladesh (ULAB)
Dhaka, Bangladesh

Subject: **Internship Appointment Letter**

Dear Madam,

We are pleased to inform you that Blackfox Limited has appointed you as an Intern for a period of three (3) months, commencing from 01 February 2026.

This internship is offered to support your academic and professional development and is intended to fulfill the internship requirement of your respective educational institution.

During your internship at Blackfox Limited, you will be assigned responsibilities relevant to your academic background and organizational needs. These may include, but are not limited to, research, technical support, operational assistance, documentation, and exposure to real-world industry practices. You will work under the supervision and guidance of designated personnel, and your performance will be evaluated throughout the internship period.

Please note that this internship is offered strictly for academic and learning purposes. Interns are expected to maintain professional conduct, confidentiality, punctuality, and compliance with company policies at all times.

Upon successful completion of the internship and fulfillment of assigned responsibilities, Blackfox Limited will provide an Internship Completion Certificate.

We look forward to welcoming you to Blackfox Limited and wish you a productive and enriching internship experience.

Should you require any further information, please feel free to contact us.

Thank you.

Yours sincerely,


Mohammed Raihan Akash
Managing Director
Blackfox Limited



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Figure 8.1: Appointment Letter

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