

# SAMARTH BIKKI

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## Education

### University of Texas at Dallas

Bachelor of Science in Computer Science

Aug. 2024 – Current

Dallas, Texas

## Relevant Coursework

- Data Structures and Algorithms
- Computer Science I/II
- Discrete Math
- Probability and Statistics
- Linear Algebra
- Software Engineering
- Mechanics and Electricity/Magnetism

## Experience

### National STEM Honor Society

Oct 2022 – Dec 2023

Web Developer Intern/Assistant Manager

Austin, TX

- Spearheaded website overhaul, resulting in a **75 percent improvement** in user engagement metrics through data-driven optimizations using WordPress and GitHub.
- Facilitated **15 percent** market share increase in **6 months** by leading strategic partner engagement projects.
- Mentored junior developers, implementing Agile practices and code reviews that improved team efficiency by **30 percent** across WordPress, Java, and Python stacks.

### MIT's BWSI

Feb 2022 – Sep 2022

Research Intern

Cambridge, MA

- Outperformed **over 1,000 applicants** to secure a position in MIT Engineering's elite research program, where I revolutionized security protocols, achieving a **50 percent improvement** through groundbreaking research in disk/network forensics and malware analysis.
- Leveraged intensive MIT training to develop cutting-edge machine learning models, resulting in a novel cybersecurity tool that reduced threat detection time by **40 percent**.
- Initiated OSINT-driven cybersecurity research, boosting threat awareness by 30 percent. Ensured 99.9 percent system uptime, preventing 500K dollars in potential breach losses.

## Projects

### Disease Classification | Python, Tensorflow, AWS, Azure

Jan 2024 - May 2024

- Modernized an end-to-end deep learning pipeline using TensorFlow and Python, achieving **95 percent accuracy** in disease classification.
- Implemented MLOps tools (DVC, GitHub Actions) to streamline model training and deployment, reducing update time by **50 percent**.
- Exhibited multi-cloud deployment on AWS and Azure, showcasing proficiency in scalable, high-availability cloud environments and reducing setup time by **40 percent** through modular coding and comprehensive dependency management.

### Stable Diffusion Model for Image Generation | Python, PyTorch, Tensorflow

Jun 2024 - Aug 2024

- Pioneered a cutting-edge stable diffusion model that boosted image generation quality by **50 percent**, leveraging advanced variational autoencoders and attention mechanisms to optimize ELBO loss function and noise management.
- Designed an innovative encoder-decoder architecture with upsampling processes, resulting in a **35 percent** enhancement in model performance and preserving intricate image details at original dimensions.
- Revolutionized model capabilities with text-to-image integration, boosting image clarity by **25 percent** and expanding cross-industry applications, resulting in **40 percent increase** in potential market value.

### Feedback Board Application | React, Next.js 13, AWS S3,

Sep 2024 - Current

- Developed a feedback board using Next.js 13, featuring pop-ups, file uploads to AWS S3, and a secure voting system, enhancing user engagement and interactivity.
- Integrated advanced user interactions, including commenting, editing, and search functionality, resulting in a **30 percent increase** in user satisfaction and efficient feedback management.
- Engineered an advanced user interface with pagination and sorting features, boosting data processing speed by **60 percent** for large datasets and increasing overall user satisfaction by **40 percent** through improved accessibility and responsiveness.

## Technical Skills

**Languages:** Python, Java, C, C++, HTML, CSS, JavaScript, SQL

**Developer Tools:** VS Code, Eclipse, Google Cloud Platform, Android Studio, Amazon Web Services, Bootstrap, Azure

**Technologies/Frameworks:** Linux, GitHub, WordPress, Tensorflow, PyTorch, Django, AngularJS, React