**FAZAL E RABBI - AI/ML Software Engineer**

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I am an AI/ML Software Engineer driven by a passion for innovation and technology. With a robust foundation in various programming languages such as C++, Python, and JavaScript, I have honed my skills in Object-Oriented Programming (OOP) and Data Structures and Algorithms (DSA). My proficiency extends to web development using Flask, machine learning with TensorFlow, and database management with MongoDB. This diverse skill set enables me to develop and implement complex solutions efficiently.

During my internship at Systems Limited, I enhanced my skills by working on cutting-edge technologies through practical application in dynamic projects. This experience deepened my understanding of AI applications and their real-world implications. I gained proficiency in methodologies and processes relevant to AI development, strengthening my capability to innovate within a collaborative software development setting. During this period, I implemented machine learning algorithms on the Boston housing and Iris Flowers datasets using NumPy and TensorFlow. I also explored deep learning techniques, including the implementation of Artificial Neural Networks, ResNet, and LeNet. My contributions to custom object detection with YOLO involved training weights and crafting custom image classification models using TensorFlow, showcasing my creativity and adaptability.

One of my significant projects was the development of an end-to-end student performance calculation system using machine learning algorithms, incorporating Exploratory Data Analysis (EDA) and feature engineering techniques. Additionally, I developed an end-to-end Chicken Disease Detection system using the VGG-16 model. My experience with version control using Git and automated testing frameworks further solidified my technical skills.

A notable project I spearheaded was a text summarization project leveraging Google's Pegasus model trained on the CNN/DailyMail dataset. This project involved implementing CI/CD pipelines for automated testing and deployment, ensuring seamless integration of model updates. I presented the project outcomes at technical forums, showcasing the efficacy of Pegasus in generating concise summaries.

For my Final Year Project (FYP), I developed a web application that allows users to upload images for automated caption generation. Utilizing Hugging Face's Blip framework, fine-tuned on the Diffusion dataset, I achieved accurate captions and integrated text-to-speech functionality for audio caption

output. This project demonstrated my proficiency in machine learning, web development, and accessibility integration. Presenting this project at showcases highlighted my problem-solving skills and ability to utilize cutting-edge technology.

I am committed to continuous learning and exploring new advancements in AI/ML. Currently, I am delving into LangChain and the latest Large Language Models (LLMs) to further expand my knowledge and capabilities. My goal is to leverage these advanced technologies to create innovative projects that push the boundaries of what is possible in the field of artificial intelligence.

Throughout my journey, I have worked on various small projects, continuously learning and applying new skills. I am adept at working with large datasets, performing data preprocessing, and conducting model evaluation, validation, and optimization. My strong problem-solving and analytical skills, coupled with effective communication and collaboration abilities, make me a valuable team member.

I am now seeking a challenging data scientist role in a dynamic and innovative environment where I can leverage my technical prowess and analytical skills to develop groundbreaking solutions. I am excited to bring my evolving skills to a forward-thinking company and make a significant impact through the use of cutting-edge technology. For more details or references, please feel free to contact me at fazalerabbi.se@gmail.com or +923098480411.

**Skills:**

- Programming Languages: Python, JavaScript, C++
- Machine Learning Algorithms and Techniques
- Deep Learning Frameworks: TensorFlow
- Neural Networks and Architectures
- Data Preprocessing and Large Datasets
- Model Evaluation, Validation, and Optimization
- Version Control Systems: Git
- Problem-Solving and Analytical Skills
- Effective Communication and Team Collaboration

**Experience:**

- **Intern at Systems Limited:** July 2023 to September 2023
  - Implemented machine learning algorithms using NumPy and TensorFlow
  - Explored deep learning techniques: ANN, ResNet, LeNet
  - Contributed to YOLO for custom object detection
  - Developed custom image classification models
  - Created end-to-end student performance calculation system
  - Developed Chicken Disease Detection system with VGG-16
  - Utilized Git for version control and automated testing

- **Text Summarization with Pegasus (CNN/DailyMail):**
  - Led text summarization projects with Google's Pegasus model
  - Implemented CI/CD pipelines for automated testing and deployment
  - Presented project outcomes at technical forums

- **Final Year Project (FYP): Automated Image Captioning & Text-to-Speech Web App**
  - Developed a web application for automated image caption generation
  - Utilized Hugging Face's Blip framework for accurate captions
  - Integrated text-to-speech functionality for audio caption output
  - Presented project at showcases

I am committed to continuous learning and applying my skills to develop innovative solutions that drive impactful change. I look forward to the opportunity to contribute to a dynamic team and advance my career in the field of AI/ML.