MD. SHOHIDUL ISLAM

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About Me

I am a driven, ambitious and self-motivated person who has a passion for data science, data analysis and researching, business analysis, information technology, artificial intelligence, machine learning and leading projects. I strongly value continuous learning and knowledge sharing, which guide my professional and personal growth. I am seeking a challenging position at a reputable organization where I can leverage my technical and managerial skills to contribute to the company's objectives while enhancing my expertise in current and emerging trends within the IT industry.

Academic Credentials

American International University of Bangladesh (AIUB) **2025**
Bachelor Of Science in Computer Science and Engineering. Major : Information System
CGPA : 3.31
Relevant Courses: Data Science, Data Mining and Data Warehouse, Machine Learning, Artificial Intelligence, Computer Vision and Pattern Recognition, Human Computer Interaction, Computer Network, Data Communication, Operating System, Computer Organization and Architecture, Compiler Design, Web Technology, Python, Compute Graphics with C++, Object-Oriented Programming with C#, Object-Oriented Analysis and Design, Data Structure and Algorithm with C++, Database Management System, Object-Oriented Programming with Java, Discrete Mathematics, C++ .

Skills

Programming	: C, C++, Java, C#, Python, R
Deep Learning Framework	: TensorFlow, Pytorch
Web Development	: HTML, JavaScript, PHP
Database	: MySQL, MongoDB
Others	: Tableau, GitHub, MATLAB, Assembly Language.

Cisco Certified as an IT Essentials course.

Language Proficiency

- Fluent in Bangla and English — Both verbal and written.

Research Experience

Research Intern at Advanced Machine Intelligence Research Lab (AMIR Lab)
AMIR Lab focuses on reinforcement learning, algorithm development, and contributing to research publications in a collaborative academic environment.
I work on Research on – "***Light-ROANet: Lightweight Retinal OCT Attention Network***"

- Developed Light-ROANet, a lightweight CNN + attention model for OCT retinal disease classification.
- Achieved 97.06% accuracy with only 369.8K parameters.
- Outperformed ResNet and EfficientNet in both efficiency and performance.
- Used data augmentation, Grad-CAM, and TensorFlow/Keras for implementation and interpretability.

"A Bee Flight Path Dataset for Bio-inspired Studies"

- Developed an open-access bee flight path dataset by capturing and reconstructing 3D trajectories of honeybees using stereo vision and computer vision techniques.
- Implemented camera calibration, object detection, and trajectory reconstruction.
- Conducted quantitative analysis of bee flight patterns, including average speed (39.48 mm/sec), encounter distances, and density metrics for behavioral insights.
- Contributed to interdisciplinary applications in AI, swarm robotics, UAV navigation, and ecological monitoring.

Projects

- **Bee Collision Avoidance**
  Skills: Computer Vision, OpenCV, Python, Checkerboard Camera Calibration, MATLAB
  - Conducted stereo camera recordings of bees, capturing detailed movement data.
  - Performed camera calibration to ensure accurate 3D spatial measurements.
  - Annotated datasets for comprehensive analysis of bee trajectories.
  - Developed and reconstructed precise 2D and 3D trajectories of bees, enabling insights into movement patterns and behavior.
- **Titanic Data Cleaning and EDA Project**
  Skills: Python, Data Cleaning, Exploratory Data Analysis (EDA), Pandas, Matplotlib, Seaborn, Statistical Analysis, SciPy.
  - Cleaned and analyzed the Titanic dataset using Python libraries.
  - Handled missing values, removed duplicates, and created new features for better insights.
  - Visualized survival rates by gender and class and performed statistical tests (e.g., t-test).
- **Data Science Project on Cancer Dataset**
  Skills: Data Science, R, R Studio, K-Means Clustering
  - Analyzed a cancer dataset using R and R Studio, employing data pre-processing techniques such as missing value imputation and feature scaling to prepare the data for analysis.
  - Utilized statistical methods and machine learning algorithms to uncover trends and identify factors influencing cancer outcomes.
  - Conducted exploration data analysis (EDA) to visualize key patterns and correlations in the dataset.
- **Face Recognition Attendance System**
  Skills: Computer Vision, OpenCV, Python, VGGFace, Face Recognition.
  - Developed a face recognition system using the VGGFace model.
  - Trained the model on a specific dataset.
  - Applied advanced preprocessing and fine-tuning techniques.
- **Clothing Store Management System – Windows Application**
  Skills: C#, GunaUI, Data Structure, Algorithms, Visual Studio, Microsoft SQL Server
  - Developed a retail management application with three user roles: Owner, Manager, and Shopkeeper, each with specific permissions and functionalities
  - Designed and implemented key features, including sales activity tracking, inventory management, and user authentication.
  - Integrated a polished and user-friendly interface using Guna UI to enhance the overall user experience.
- **Aqua Ignis Computer Graphics is a two-player game in computer graphics**
  Skills: : C++ , OpenGL
  - Two-player C++ OpenGL game with Aqua (blue) and Ignis (red).
  - Fire kills Aqua, water kills Ignis, and green toxin kills both.
  - Players press yellow buttons and move cyan boxes to progress.
  - Goal is to cooperate, overcome hazards, and reach the door to advance.

References

Shah Riyad Chowdhury
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