Tasnia Haque

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Skills

- **Programming Languages & Core:** Python | C++ | JavaScript | C
- **AI & Machine Learning:** Machine Learning | Deep Learning | Image Processing | NLP | Generative AI | Data Science | Computer Vision
Frameworks & Libraries: PyTorch | TensorFlow | Flask
- **Networking & Systems**: Optical Fiber | DWDM | Networking Concepts
- **Development & Tools:** Git | Linux | Problem Solving | Competitive Programming (Codeforces Pupil | Hackerrank Silver | CodeChef 1★ | AtCoder 13 Kyu)

Experience

Software Engineer — Business Novelty Ltd — *Dhaka, Bangladesh* — **11/2024 - Current**

- Engineered and deployed enterprise-grade software solutions with integrated ML/AI modules, boosting workflow automation.
- Optimized system performance and scalability, reducing response latency and improving overall user experience.
- Collaborated with cross-functional teams to deliver production-ready applications, ensuring code quality and pipelines.

Machine Learning Researcher — United International University (AIMS) — *Dhaka, Bangladesh* — **05/2024 - 11/2024**

- Developed and tested advanced ML models, improving prediction accuracy by up to 15% compared to baseline methods.
- Authored and co-authored research publications, including an IEEE paper on Brain Tumor Classification and an under-review forensic AI study using 3D CNNs.
- Contributed to building reproducible research pipelines with Python, PyTorch, and TensorFlow.

Junior Machine Learning Eng — 4P Marketing Consultancy Ltd — *Dhaka, Bangladesh* — **02/2023 - 03/2024**

- Conducted applied research in Generative AI, NLP, and Decentralized Systems, driving innovation in academic and industry projects.
- Designed and deployed ML models for marketing analytics and customer behavior prediction, increasing campaign efficiency by 12%.
- Streamlined ML workflows by optimizing training pipelines, reducing processing time by 20%.
- Integrated predictive analytics into client dashboards, enabling data-driven decision-making and improved ROI tracking.
- Enhanced collaboration between data science and business teams by delivering actionable insights.

Education

Bachelor of Science — Rajshahi University of Engineering and Technology (RUET) — *Bangladesh* — **11/2018 - 10/2022**

- Data Structure, Algorithms, Numerical Methods, Artificial Intelligence, Data Communication, Computer Graphics, Pattern Recognition, Discrete Mathematics, and Object-Oriented Programming.
- **CGPA: 3.34**

Projects

- **Sevensix:** Designed and developed an award-winning **RAG-based product recommendation engine** for a leading Japanese e-commerce company, delivering personalized shopping experiences and increasing customer engagement.
- **SRS Doc Generator :** Developed an AI-powered chatbot system that auto-generates **Software Requirement Specifications (SRS)** using **LLMs** and the OpenAI API, streamlining documentation workflows.
- **Heart Disease Detector:** Built a predictive **healthcare ML model** to detect cardiovascular risks from patient datasets. Applied classification algorithms achieving **>90% prediction accuracy**.Deployed with Python and Flask for practical accessibility in healthcare environments.

Publications

- **Garbage Classification:** Achieved high accuracy in waste classification using Transfer Learning with Parameter Tuning. (**Published: IEEE**
- **BloodStein Hyperspectral Image Classification**: Using 3D CNN for advanced classification of hyperspectral medical images. **(Published: ICEEICT, IEEE Xplore)**

Awards

- **ICPC Preliminary Dhaka Site 2023- (522th out of 2600 team)** - 21st July,2023
- **North Bengal Startup Summit 2023** Idea contest Finalist **(4th)**
- **Idea and Project showcasing Contest,RUET (Finalist 7th position)** - 1st september,2023