

Sharna Rani Das

Senior Software Engineer

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1 POSITION	Senior Software Engineer (Full-Stack Web Development with Agentic AI)							
2 NAME	Sharna Rani Das							
3 DATE OF BIRTH	16 January 2000							
4 NATIONALITY	Bangladeshi							
5 MEMBERSHIP	Former Executive Member (Webmaster), IEEE WIE BUBT Student Branch Affinity Group, 2021							
6 EDUCATION	M.Sc. (Engg.) in Computer Science and Engineering — CGPA 3.73 (Running) Bangladesh University of Business and Technology (BUBT) May 2026 – Continue B.Sc. (Engg.) in Computer Science and Engineering — CGPA 3.55 / 4.00 Bangladesh University of Business and Technology (BUBT) 2019 – 2023							
7 TRAINING	- Machine Learning Explainability Course — Kaggle - Data Visualization Course — Kaggle - IBM Data Science Professional Certificate - Introduction to Data Science — Cisco - Arduino Programming — Think-ROBO - Robotics & IoT Course — Robo Tech Valley 2025 Aspire Leaders Program — Aspire Institute (Harvard University), fully funded							
8 LANGUAGE PROFICIENCY	<table><tr><th>Language</th><th>Speaking</th></tr><tr><td>English</td><td>Fluent</td></tr><tr><td>Bengali</td><td>Native</td></tr></table>		Language	Speaking	English	Fluent	Bengali	Native
Language	Speaking							
English	Fluent							
Bengali	Native							
9 COUNTRY OF WORK EXPERIENCE	Bangladesh							
10 EMPLOYMENT RECORD	Senior Software Engineer — Unisoft Systems Limited 12 Oct 2025 – Present <i>Department: Software & AI</i> - Design and build backend services with FastAPI for AI-powered product features, following RESTful API best practices. - Containerize applications with Docker and manage deployment pipelines to Docker Hub for reproducible releases. - Build agentic AI workflows integrating LLM-based reasoning with external tools and APIs. - Implement RAG pipelines using Chroma DB for vector storage and semantic retrieval. - Develop and customize Odoo ERP modules to support business process automation.							

	- Collaborate cross-functionally to translate product requirements into production-ready AI solutions. Instructor, Computer Science & Technology — UIST, UCEP Bangladesh Apr 2024 – Oct 2025 - Assisted lead instructors in delivering core computer science content and structured lab sessions. - Provided one-on-one student support and tutoring in programming and problem-solving. - Administered exams and maintained academic performance records. - Developed supplementary practice exercises and lab guides. Junior Software Engineer — Teknovus Limited Feb 2023 – Mar 2024 - Developed back-end systems in PHP/Laravel for IoT and garment-technology applications. - Built real-time dashboards for monitoring IoT devices across production lines. - Integrated sensor data streams with hardware and QA teams; participated in agile code reviews.
11 PUBLICATIONS	Peer-Reviewed / Accepted - Das, S. et al. "Depression Detection Using Convolutional Neural Networks." IEEE SPICSCON 2021. - Giri, A., Das, S. et al. "Smart IoT Egg Incubator System with Machine Learning for Damaged Egg Detection." WorldS4 2025, Springer LNNS. - Das, S. et al. "Cost-Effective High-Reliability IoT-Based Multi-Modal Patient Monitoring with Real-Time Clinical Alerts and Cloud Analytics." IEEE COMPAS 2025. Under Review - Das, S. et al. "Above Chance, Below the Baseline: A Majority-Anchored, Case-Grouped Ablation for Thyroid Ultrasound Segmentation and Report-Derived Suspicion Classification." - Das, S. et al. "Cross-Lingual and Cross-Domain Transfer Learning for Digital-Arrest Scam Detection via Transformer Warm-Starting with Coercion-Stage Explainability." IEEE CSDE 2026. - B.Sc. Thesis: "Detecting Skin Cancer Through the Utilization of Various Types of Deep Convolutional Neural Networks (CNNs) and Generative Adversarial Networks (GANs)."
12 WORK CAPABILITY	I am a full-stack software engineer and AI researcher with hands-on experience building production AI systems and publishing peer-reviewed research. My professional work centers on Python/FastAPI backend development, Dockerized deployment pipelines, agentic AI workflows, and RAG pipelines built on Chroma DB/FAISS for retrieval-grounded LLM applications. Alongside this, I develop full-stack web applications with Laravel, Node.js, and Next.js. My research extends the same focus into explainable AI for security- and safety-critical domains — blockchain-verified IoT intrusion detection, multimodal deepfake and scam detection, and interpretable medical image classification — combining strong engineering execution with a research-driven, evidence-based approach to building trustworthy AI systems.
13 COMPUTER SKILL	Programming Languages: Python, JavaScript, PHP, Java, C, C++, R, SQL AI/ML: LLMs, RAG (Retrieval-Augmented Generation), Agentic AI Systems, Computer Vision, NLP, OCR, Prompt Engineering & Fine-Tuning, Predictive Modeling (ML/DL), Vector Embeddings, Explainable AI (SHAP/LIME) Frameworks:

	FastAPI, Laravel, Next.js, Node.js, LangChain, LangGraph, Hugging Face Transformers, PyTorch, TensorFlow, Keras, Scikit-learn, OpenCV, Tesseract OCR, Odoo 19 CE Data & Database: MySQL, PostgreSQL, MariaDB, Chroma DB, FAISS, Pinecone, Weaviate System & Cloud: Docker, Docker Hub, n8n, REST APIs, Apache Kafka, RabbitMQ, Redis, WebSockets Data Visualization: Matplotlib, Seaborn, Plotly, Power BI, Apache Superset Version Control: Git, GitHub, GitLab, Branching Strategies IoT: • IoT system design & sensor integration • Real-time device monitoring • IoT security & intrusion detection
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Company & Position	Duration
Unisoft Systems Limited — Senior Software Engineer	12 Oct 2025 – Present
UIST, UCEP Bangladesh — Instructor, Computer Science & Technology	Apr 2024 – Oct 2025
Teknovus Limited — Junior Software Engineer	Feb 2023 – Mar 2024