

# SHAMPA BANIK

Dhaka, Bangladesh

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## RESEARCH INTERESTS

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Image Processing, Computer Vision, Natural Language Processing, Deep learning

## EDUCATION

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**Patuakhali Science & Technology University (PSTU)** January 2018 — October 2023  
B.Sc. in Computer Science and Engineering ( Dean's List last three Semesters ) Cumulative GPA: 3.84/4.00 (Rank: 1/49)  
Thesis Title:

## APPOINTMENTS

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**Bangladesh University of Business and Technology (BUBT)** Dhaka, Bangladesh  
*Lecturer* July 2024 — Present  
**Conducting Courses:** System Analysis and Design, Numerical Analysis and Computer Operation & Applications.

**University of Scholars** Dhaka, Bangladesh  
*Lecturer* November 2023 — June 2024  
**Conducting Courses:** Data Structure and Algorithms, Software Engineering, Computer Fundamentals, Numerical Analysis, Competitive Programming and Technical Writing.

## HONORS AND AWARDS

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**PSTU Dean's Merit Award:** Awarded scholarships for academic excellence among 70 students from session 2019 to 2021.  
**PSTU IT Carnival: First Prize** for the "IOT-Based Food Spoilage Detection System" project at IT Carnival.  
**NGPC'18:** Selected for the **National Girls Programming Contest (NGPC)** in both 2019 and 2021.  
**PSTU Independent Day Programming Contest:** Ranked in the top 5 out of 50 teams in 2018.  
**Merit Scholarships:** Government Board Merit scholarships for outstanding results in both Secondary School Certificate (2015) and Junior School Certificate (2012).

## SELECTED PROJECTS

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- D-Alert: Dengue Prediction using Machine Learning | Python** Jan 2023
- Built a dengue dataset from DGHS data, developed an LSTM model for area-based dengue prediction, and bench-marked against three models.
- SmartSpoil: IOT Based Food Soilage Detection System | Arduino** July 2021
- Developed an IoT-based system using Arduino to monitor and detect food spoilage. The system utilizes sensors to track key freshness indicators, providing real-time alerts to ensure food safety.
- Eatsy: Web Application for Food Ordering | HTML, CSS, Bootstrap, PHP, JavaScript, MS-SQL** August 2022
- Developed a smart food ordering app using modern development tools and software design principles to ensure fast connectivity, efficient data management, and a modular system architecture.
- WellnessWise: A Desktop Application for Healthcare Management | Java, System Design** August 2022
- Built a healthcare management desktop app using Java and MS-SQL, employing OOP principles for efficient management of patient records and appointments, ensuring modularity and scalability.

## Publications

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### Journal Papers

- Submitted:** "Efficient and Accurate Classification of Watermelon Diseases using CucurbitViT: A Vision Transformer Based Approach." *First Author*

## Conference Papers

- **Accepted:** "A Novel Classification Scheme for Early Alzheimer's Disease (AD) Severity Diagnosis Using Deep Features of a Hybrid Cascade Attention Architecture." ***Second Author***
- **Submitted:** "Classifying Bengali Quotes: A Comparative Study of Machine Learning and Deep Learning Approaches." ***Second Author***

## TECHNICAL SKILLS

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- **Programming Languages::** Python, Java, C, C++, Javascript, HTML, CSS, MATLAB, Assembly
- **Machine Learning:** PyTorch, Keras, OpenCV, TensorFlow, NLTK, Pandas, NumPy, Matplotlib
- **Developer Tools:** VS Code, CodeBlocks, LATEX, PyCharm, Jupyter Notebook, Eclipse
- **Frameworks:** Linux, Bootstrap, Arduino
- **Version Control:** Git, Github
- **Illustration Tools:** Proficient in Adobe Illustrator, Adobe Photoshop

## SELECTED CO-CURRICULAR ACTIVITIES AND SERVICES

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- Created hundreds of **digital artwork and logo designs**
- **Member, Sub-Committee (Project), CSE Club, PSTU:**  
Contributed to organizing and implementing projects, fostering innovation within the club. September 2021 - October 2023
- **Volunteer, Communication Team – Talk Digital Platform (Way to Dreams):**  
Assisted with communication efforts, audience engagement, and content outreach. August 2021 - October 2021
- An Article published in Medium in 2020- **Beyond the Boom: Unraveling the Complexity of AI in 2030**