




Sudarshan Mondal

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Education

North Western University, Bangladesh, Bachelor of Science (Honours) in Computer Science and Engineering **Jan 2015 – Jan 2019**

- **CGPA:** 3.89 out of 4.0
- **Thesis:** Bengali Handwritten Character Recognition using Deep Learning
- **Relevant Coursework:** Data Structures, Algorithms, Operating Systems/Systems Programming, Parallel & Distributed Processing, Database Systems, Computer Networks, Advanced Computer Architecture, Software Engineering & Development I-III, Information Security, Artificial Intelligence & Neural Networks.

Higher Secondary Certificate Examination (HSC), Science Group **2014**

- **GPA:** 4.70 out of 5.0

Secondary School Certificate Examination, (SSC), Science Group **2012**

- **GPA:** 5.00 out of 5.0

Research Interests

Automated Program Repair, Agentic Software Debugging, Fault Localization, Software Engineering for AI/ML Systems, Cloud Computing, Distributed Systems

Publications

Convolutional Neural Networks Based Bengali Handwritten Character Recognition **July 2020**

Sudarshan Mondal, Nagib Mahfuz

Published in *Lecture Notes in Computer Science (LNCS)*, Springer — Part of ICICCT 2020 Proceedings

link.springer.com/chapter/10.1007/978-3-030-52856-0_57

Industry Experience

Software Engineer, Jukto Digital – Khulna, BD **Aug 2022 – Present**

- Implemented a distributed logging system processing 1M+ log entries/day, improving data integrity monitoring across teams.
- Designed a secure file-serving system using AWS and Terraform to support key-based access with caching and logging.
- Developed a high-throughput preprocessing pipeline handling 5K+ requests/min, increasing API responsiveness by 65%.
- Optimized 50+ complex MySQL queries (10M+ records), improving dashboard load time and operational data access.
- Introduced service-repository patterns and led code reviews, reducing post-release bugs by 15% and improving CI test reliability.

Software Engineer, Angular Esports – Dhaka, BD **Mar 2022 – Jul 2022**

- Automated matchmaking and live scoring with a Django-based engine, cutting manual work by 35%.
- Replaced manual data input with a Django-based Google Vision pipeline, improving accuracy and cutting input time by 30%.

Software Engineer (Android), Appsinception – Khulna, BD **Jul 2020 – Aug 2021**

- Developed two Android apps (News, Car Marketplace) with cross-device compatibility using Java, Firebase, Room, and Retrofit.
- Refactored a legacy app with MVVM and repository architecture, improving performance by 30% and user retention by 20%.
- Reduced crash rate from 45% to under 10% by targeting high-failure areas through systematic diagnostics and QA efforts.

Data Scientist, Hellotask – Dhaka, BD **Feb 2020 – Jul 2020**

- Built an AI-powered recommendation engine using Python, improving sales by 20% and customer retention by 15%.
- Automated manual analytical reporting with a Django and Chart.js dashboard with periodic auto-refresh.

Projects

Server Monitor

Feb 2024

- Designed a distributed server monitoring system using microservices, Python, Golang, Redis, and PostgreSQL.
- Enabled real-time alerts and fault isolation under high-traffic conditions with 12-factor deployment principles.

The FlashMob

Sep 2021

- Built a cross-platform video app with real-time chat, feed generation via Celery, and local video caching.
- Improved performance and reliability by reducing server load by 40% and filtering out 70% of spam comments.

Alphabet to Art: Draw Picture from Letter

Jan 2021

- Designed a kid-friendly drawing app with 120+ guided alphabet art tutorials and an interactive canvas for creative expression.
- Supports drawing with custom pens, saving artwork, and encouraging learning through hands-on creativity.

The Foodies - Find Foods & Restaurants

Aug 2020

- Built a personalized food finder with smart search, photo-based reviews, and relevance-ranked suggestions.
- Enabled restaurants to manage menus and respond to users, driving better engagement and featured dish visibility.

Awards

- 2020 - **Top-5 performers (out of 50)** – Fujitsu Research Institute ML & Data Science program, Tokyo, Japan,
- 2018 - **Champion**, the software exhibition contest in 2018 at North Western University.
- 2017 - **Runner-Up**, software exhibition at Khulna University, among 25 inter-university contests.
- 2016 - **Champion**, Global Robotics Challenge, at North South University, in a nationwide competition.
- 2016 - **Runner-Up**, software exhibition at Khulna University of Engineering & Technology, among 30 inter-university contests.

Skills

Languages & Frameworks:

- Python, Java, Golang
- Django, FastAPI, DRF, Celery, Pytest
- Linux, Bash scripting

Data & ML Ecosystem:

- TensorFlow, Keras, NumPy, Pandas, Matplotlib, scikit-learn
- Feature Engineering, Model Evaluation, Time-Series Forecasting

Databases:

- PostgreSQL, MySQL, MongoDB

DevOps & Cloud:

- Docker, Redis, AWS, Terraform
- Git, GitHub Actions, NGINX, CI/CD

Architecture & Methodologies:

- Microservices, System Design, Design Patterns
- Clean Code, TDD, Agile

Training

Data Science Trainee, *Fujitsu Research Institute, Tokyo, Japan.*

Sep 2019 – Dec 2019

- Developed machine learning models to predict vehicle demand (93% accuracy) and household power usage (86%).
- Led a 6-member team and produced technical and non-technical reports under strict deadlines, emphasizing model interpretability and performance.

Service & Leadership

President of Computer Club, *North Western University.*

Jul 2018 – Jan 2019

- Co-founded the Computer Club by collaborating with peers and faculty to formalize its structure and objectives.
- Organised the university's inaugural on-campus programming contest, boosting student engagement in competitive coding.

Campus Ambassador, *Khulna Open Source Network.*

Jul 2018 – Jan 2019

- Conducted Java and app development workshops to promote tech skills among **female students** at North Western University.

Languages

- English - Proficient (IELTS 7.0)