

# Debasish Biswas

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## EDUCATION

Master's of Computer Application (MCA), NIT Jamshedpur

CGPA: 8.0 2021- Present

Bachelor of Science in Computer Science (B.Sc. Honours), Siliguri College ( NBU )

CGPA: 8.7 2018-21

## RESEARCH WORK:

Fidelity and Entanglement of Random Bipartite Pure States: Insights and Applications <https://arxiv.org/abs/2308.01714>

- Observation of non-uniform distributions and upper bounds based on measuring quantum states' entanglement
- Revealed **quantum random number generator potential**. Consistent entanglement-fidelity relationship across dimensions.

## OpenSource EXPERIENCE

Google Summer of Code 2023

May'23 - Aug'23

Knative under CNCF

[summerofcode.withgoogle.com/programs/2023/projects/BHsUqzLn](https://summerofcode.withgoogle.com/programs/2023/projects/BHsUqzLn)

[JAVA 20, Vert.x, Kubernetes, Apache Kafka, Bash Scripting, GoLang]

- Implement Knative Kafka Broker data-plane communication with the **Apache Kafka** client and Vert.x Kafka client library.
- Develop the solution using **Java 20** and leverage the new features, specifically **Virtual Threads (Loom)**, for efficient and concurrent communication with the **Apache Kafka** cluster. That can lead to increasing the performance of the system.
- Collaborate with a team of developers to deliver high-quality code contributions.

## The/Algorithms

- Contributor and Maintainer of the [JAVA repository of The/Algorithms](#) project that has more than 50k+ ★ GitHub.

## PROJECTS

Question Book [ExpressJS, MySQL, TypeScript, GitHub-Actions]

[github.com/debasishbsws/question-book](https://github.com/debasishbsws/question-book)

- Designed and developed a high-performance Node.js Backend Rest API, enabling seamless access to University information and Question Papers stored in a public GitHub repository.
- Implementing **Continuous Integration** to automatically update the database for every Pull Request that adds new question papers to the repository.
- I automated the Build and Testing of the code and also the Docker image creation process, ensuring smooth integration.

Apache Kafka OAM APP [Shell Script, Docker, Kubernetes, YAML]

[github.com/debasishbsws/kafka-OAM-application](https://github.com/debasishbsws/kafka-OAM-application)

- Leveraged OAM (Open Application Model) to deploy Apache Kafka on Kubernetes, enabling a highly abstract and modular approach to application deployment.
- Achieved more streamlined and manageable Kafka deployment with greater flexibility and ease of iteration and scaling by abstracting away the underlying infrastructure complexities.
- Featured in the NAPTIVE catalog for easy access and adoption in the **NAPTIVE cloud**

## SKILLS

- **Programming Language:** Java (proficient), GoLang, JavaScript, TypeScript, Bash script, YAML
- **Tools:** Git (VCS), Docker, Kubernetes, Knative | **Database:** MySQL, MongoDB
- **OS:** Linux (Ubuntu), Windows | **IT Constructs:** OOP, DBMS

## CERTIFICATIONS and BADGES

[Deploy to Kubernetes in Google Cloud - Google Cloud](#)

[Deploy and Manage Cloud Environments with Google Cloud - Google Cloud](#)

[Complete Web Development - Udemy](#)

## EXTRACURRICULAR

**Photography:** A landscape photographer by passion. Instagram/[@debasishbsws](#) . Member of Phocus (NITJSR).

**Music:** A guitarist, Founded a local band with fellow musicians and had a [YouTube Channel](#) with 13K+ subscribers.