# Santanu Banerjee

## Senior Software Engineer at Capgemini

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#### **SUMMARY**

Senior Software Engineer with over 1 year of experience in data management and archival projects leveraging Python, SQL, OpenText InfoArchive, and ETL solutions. Possesses a strong foundation in data science with an M.Sc. degree and a demonstrated aptitude for innovative technologies through internships focused on quantum computing.

#### **PROFESSIONAL EXPERIENCE**

Dec 2021 - present

## **Senior Software Engineer**

Capgemini

- Secure Communication Inspector
  - Developed a versatile GenAI model with fine-tuned prompts as specialized pipelines for extracting actionable insights from a diverse range of files, including text, PDFs, images, audio and video formats
  - Engineered an intuitive Streamlit-based user interface, empowering customers to seamlessly upload files or emails with attachments, while the system adeptly detects and categorizes sensitive and non-sensitive data, providing a comprehensive risk assessment for informed business decision-making
  - Implemented end-to-end deployment of the solution, showcasing expertise in data extraction across multiple file types, ensuring robust customer-centric functionality and enhancing organizational risk management capabilities
- Data Archival
  - Developed ETL-based data archiving solution using Python scripting
  - Responsible for implementing data archival processes to ensure longterm preservation and access to critical data.
  - Collaborated with cross-functional teams to identify and prioritize data to be archived, and determine appropriate storage locations and formats.
  - Developed and maintained documentation for data archival processes, including policies, procedures, and workflows, and ensure compliance with relevant regulations and standards.

## **SKILLS**

#### **Core Subjects**

Mathematics, Statistics, Data Science and Quantum Computing

## Languages

Python, SQL

## Tools and Technologies

Linux, Git, Microsoft Office, NumPy, TensorFlow/PyTorch and other Machine Learning Libraries, OpenText InforArchive

## Frameworks

Qiskit

#### **CERTIFICATES & BADGES**

Microsoft Certified: Azure Fundamentals

Issued by Microsoft

Hands On Essentials -Data Warehouse ♂ Issued by Snowflake Dataiku Core Designer Certificate ♂ Issued by Dataiku Dataiku Advanced Designer Certificate

Issued by Dataiku

#### **CERTIFICATE COURSES**

Jul 2021 **Qiskit Global Summer School** 

Online IBM

• Focus on Quantum Machine Learning

Oct 2020 - May 2021

**Introduction to Quantum Computing** 

IBM and The Coding School

Online

• Focus on basics of Quantum Computing and Quantum Algorithms

#### **PERSONAL PROJECTS**

Apr 2021 Quantum Pattern Matching ☑

Paper Implementation

• Successfully implemented the paper "Quantum Pattern Matching" by P. Mateus and Y. Omar. Paper Link - https://arxiv.org/abs/quant-ph/0508237 ☑

Nov 2020 Al Learns to play Flappy Bird ☑

Self-Learning Project

• Developed the Flappy Bird game on Python using PyGame that learns to play itself implementing Genetic Algorithm with NEAT-Python

## **EDUCATION**

2019 – 2021 **M.Sc. in Data Science** Kalyani *University of Kalyani* 

• Elective - Nanoscience and Nanotechnology

**2015 – 2019 B.Sc. in Mathematics** 

Uttarpara Raja Peary Mohan College (University of Calcutta)

• Pass Subjects - Physics, Computer Science