

Debajyoti Chakraborty

Boston, Massachusetts, USA | +1-857-272-9989 | debajyoti.chakraborty16@gmail.com
github.com/chakrabortyde | linkedin.com/in/debajyoti-c1

EXPERIENCE

- Bose** Framingham, MA
Data Engineer January 2024 – Present
 - Design and build 10+ ETL data pipelines, managing terabyte-level data ingestion to ML model deployment and monitoring
 - Integrate batch data from multiple data platforms into a centralized data warehouse, reducing data retrieval time by 95%
 - Automate data transformation and data processing, delivering it to Data Strategy team and reducing manual effort by 40%
- UBS Asset Management** Chicago, IL
Quantitative Developer July 2022 – January 2023
 - Created a factor investing tool to optimize weekly investment strategies in government bonds for 20+ developed markets
 - Improved data quality and data modeling in a performance forecasting app, enhancing accuracy by 20% for quarterly metrics
 - Gathered insights from cross-functional teams, presented results in 3 high-visibility Tableau reports for data visualization
- Northeastern University** Boston, MA
Graduate Teaching Assistant May 2022 – July 2022
 - Led group discussions, graded assignments, conducted office hours to educate 100+ students on OOP concepts and standards
- Tata Consultancy Services** India
Software Engineer October 2018 – October 2019
 - Led data migration of a legacy medical device platform from on-premises monolith to AWS, enabling multi-tenancy
 - Standardized serverless best practices, architected layers in Infrastructure as Code (IaC) to deploy highly scalable systems
 - Engineered a document search engine for over 50 SOPs and SLAs to enable semantic query search over unstructured data
 - Implemented an automated support ticket resolution system leading to a 75% reduction in resolution time and resources
 - Directed a team of 2 engineers to develop conversational AI automating Identity and Access Management (IAM) requests
 - Analyzed 10,000+ support requests and conversation logs using natural language processing (NLP) to generate answers
 - Collaborated with Quality Assurance (QA) team to rapidly deploy serverless solutions, reducing deployment time by 40%
 - Managed a 7-member, cross-domain product lifecycle management (PLM) team with daily standups and agile meetings
 - Transitioned Robotic Process Automation (RPA) tasks to Beautiful Soup and Selenium, reducing costs by 50%
- Hungry Bulb** India
Research and Development Engineer November 2016 – April 2017
 - Designed and manufactured a Wi-Fi + Bluetooth Low Energy (BLE) 3D-printed wireless speaker alongside an Android app

EDUCATION

- Northeastern University** Boston, MA
Master of Science in Computer Science; GPA: 3.9 August 2021 – December 2023
 - Coursework:** Programming Design Patterns and Paradigms, AI for Human-Computer Interaction, Foundations of AI, Machine Learning, Scalable Distributed Systems, Deep Learning
- Netaji Subhash Engineering College** India
Bachelor of Technology in Computer Science & Engineering August 2014 – November 2018
 - Coursework:** Data Structure & Algorithm, Data Base Management System, Software Development Life Cycle

PROJECTS

- ProFoundPDF: Chat with PDFs:** Built chat interface in Streamlit to segment multiple PDFs and created a vector store using OpenAI's embedding model. Integrated GPT-3.5-turbo and implemented RAG to generate context-aware responses
- Fine-tuning BERT:** Conducted ablation studies by fine-tuning BERT using HellaSwag, a MCQA dataset to reproduce benchmark results. Demonstrated 12% degradation in performance with varying context, indicating a strong bias in transformer models
- Decentralized Chat:** Leveraged RMI to implement a distributed and encrypted peer-to-peer messaging app. Upgraded with group chat, vector-clock synchronization, fortified with Paxos consensus algorithm for fail-safety

TECHNICAL SKILLS

- Programming Languages:** : C/C++, Java, Python, R, HTML/CSS, TypeScript, SQL, NoSQL
- API & Data Cloud/Storage:** : REST API, S3, RDS, PostgreSQL, DynamoDB, MongoDB, Snowflake, dbt
- Amazon Web Services:** : EC2, Lambda, Step Functions, SQS, CloudFront, Route 53, Cognito, STS, SES, ECS, ECR, Glue
- Other Tools and Technologies:** : GitHub CI/CD, Numpy, Pandas, Docker, Kubernetes, Spark, Databricks, Airflow, Jira
- Certifications:** : Oracle Certified Associate (OCA) - Java SE 8 Programmer, IBM - Applied AI with Deep Learning