

ABHI CHAKRABORTY

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SUMMARY

Data & Software Engineer with 9+ years of experience in backend systems, solution engineering, and AI-driven platforms. Skilled in real-time data processing, Python, and API integrations. Currently building GenAI-powered pipelines and dashboards, with hands-on experience designing trading strategies in a MarketWatch simulation.

EDUCATION

Master of Science in Applied Data Science

[08,2023 - 05,2025]

School of Information Studies, Syracuse University, NY, USA

Relevant Coursework: Financial Analytics, Quant Reasoning Data Science, Applied Machine Learning, Business Analytics, NLP

Bachelor of Science in Computer Science, VTU, India

[08,2010 - 06,2014]

Visvesvaraya Technological University, (VTU), India

Relevant Coursework: Data Structures & Algorithms, Statistics, Accounting & Financial Management, Computer Architecture

SKILLS

- **Programming & Tools:** Python, SQL, Django, SQLAlchemy, Kafka, REST APIs, Airflow, Bash, Java
- **Data Engineering:** PySpark, Azure Data Factory, Data Pipelines, ETL, Data Metrics
- **Data Analysis and Visualization:** Data Analysis: pandas, NumPy, SciPy, Seaborn, Matplotlib
- **Machine Learning:** scikit-learn, TensorFlow, PyTorch, Neural Networks
- **Quantitative Finance:** Portfolio Optimization, Time Series (ARIMA, GARCH), Financial Analytics
- **Generative AI:** Large Language Models (LLMs), OpenAI API, Prompt Engineering
- **Systems & Deployment:** AWS, GCP, Docker, Linux, Git
- **Visualization:** D3.js, Chart.js, React.js

EXPERIENCE

PySpark Developer / Data Engineer , QBE Insurance, USA

[09,2024 - PRESENT]

At QBE Insurance, I am leading the engineering efforts for a GenAI-powered claims analysis system designed to enhance insurance workflows. The solution processes vast insurance datasets, applies AI models to extract insights, and presents actionable outputs to adjusters via interactive dashboards.

Roles and Technologies:

- Built scalable **data pipelines** using **PySpark** and **Azure**, improving model staging speed by **30%**.
- Integrated **RESTful APIs** to connect backend systems with AI-driven front-end modules.
- Developed interactive dashboards with **D3.js**, **Chart.js**, and **React.js** for dynamic claims visualization.
- Collaborated with data science teams to enhance **model interpretability** and overall pipeline performance.

Senior Software Engineer, FireFlink, India

[06,2022 - 07,2023]

FireFlink is a high-speed test automation platform that utilizes natural language processing (NLP) to generate automation test cases from simple plain English, serving clients like Sony and various e-commerce companies.

Roles and Technologies:

- Spearheaded UI development using ReactJS and Next.js.
- Conducted usability tests, improving design, increasing user satisfaction by 25%.
- Streamlined UI development methodologies, reducing duration by 30%.

Senior Solution Engineer, PayPal, India

[10,2019 - 08,2021]

Operated within the privacy consent department, collaborating closely with the analytics team to gather user privacy consents and developed the UI for privacy banners across mobile and web applications.

Roles and Technologies:

- Designed and implemented solutions for large-scale payment systems using ReactJS and NodeJS, ensuring secure transactions for 7-8 million users.
- Addressed technical challenges, enhancing system stability, and reducing service disruptions.
- Created and deployed end-to-end automation test cases using Cypress and Selenium.

Senior Software Engineer, IBM, India**[01,2017 – 04,2018]**

Engaged in IBM Case Manager and IBM Daeja ViewONE projects. IBM Case Manager simplifies designing and building case management systems, providing a graphical user interface for case workers. IBM Daeja ViewONE ensures a consistent viewing experience for various content formats, enhancing document management capabilities.

Roles and Technologies:

- Collaborated with cross-functional teams on successful migrations using Java and SQL, focusing on data analysis and system improvements.
- Addressed and resolved intricate technical challenges, improving system stability and reducing service disruptions by 15%.
- Focused on backend development of the module and handled deployment responsibilities using IBM Cloud.

Software Engineer, Robert Bosch, India**[06,2014 - 12,2016]**

Contributed to TC Portal and Data Security Audit projects. TC Portal is a domain-based framework for managing domains in the GSTC department, used by over 500 users in Bosch GmbH. DSA manages user licenses, assets, permissions, and departmental information.

Roles and Technologies:

- Developed the product end-to-end using Java, ensuring adherence to coding standards and best practices.
- Designed both UI and backend components, enhancing functionality and user experience.
- Utilized SQL, Servlets, JSP, and JavaScript for comprehensive project development.

ACADEMIC PROJECTS**MarketWatch Trading Simulation, Syracuse University****[09/2024 – 12/2024]**

Participated in a live MarketWatch trading simulation as part of Financial Analytics coursework, where I developed Python-based algorithmic strategies to optimize portfolio performance. Applied quantitative techniques such as Sharpe Ratio, CAPM, and VaR to assess and manage risk, while using time series models like ARIMA and GARCH for forecasting. The project sharpened my skills in systematic trading, financial modeling, and data-driven decision-making.

Syracuse Pothole Predictor, Syracuse University**[01,2024 – 05,2024]**

This project involved developing a neural network-based prediction model to forecast pothole occurrences in Syracuse. The objective was to enhance road maintenance efficiency by predicting high-risk areas for potholes. The project utilized Python, neural networks, and advanced prediction techniques, achieving an impressive accuracy of 85%.

Emostream, Syracuse University**[08,2023 – 12,2023]**

Developed a system to show users a video and live record their emotions via camera. Analyzed emotions with a proprietary dataset and provided comprehensive user reaction analysis for trailers, achieving accurate audience insights.

OTHER EXPERIENCE**Digit88, India****[01,2019 – 06,2019]**

Spearheaded the architecture of ForgeAI QCTool, a platform for training AI models. Directed the development of front-end modules using React and Redux and built backend APIs with Spring Micro-services. Successfully deployed the application to the cloud using AWS, ensuring seamless integration and functionality.

Transak, India**[09,2021 – 05,2022]**

Headed the UI team for Transit, a crypto platform, addressing bugs directly from users and debugging issues across servers and local environments. Mentored junior developers in identifying and resolving issues, enhancing their problem-solving skills. Collaborated with cross-platform teams to fix bugs and improve functionality, ensuring a smooth user experience.

Instructor, Newton School, India**[12,2021 – 06,2022]**

Conducted classes for over 100 students on full-stack technologies, including HTML, CSS, JavaScript, React, Express, Node, MongoDB, SQL, and deployment. Educated students on concepts and guided them in developing practical applications and a major project utilizing the full stack technologies taught in the course.