Ritika Deshpande

New York City

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EDUCATION

Columbia University in the City of New York Masters in Computer Science **GPA: 3.8/4.0** — Dec 2024
- Courses: Cloud Computing and Big Data, Advance Software Engineering, Machine Learning, Database Systems, Natural Language Processing, Programming Languages and Translators, Advance Databases, Data Visualization, Operating Systems, Analysis of Algorithms.
- Positions: Member of **Rewriting The Code (RTC)**, Graduate TA for Database Systems.

Pune Institute of Computer Technology, India Bachelors in Computer Engineering **GPA: 9.63/10.0** — Aug 2021
- Courses: OOP, Databases, Data Structures and Algorithms, ML, Advance Algorithms, Computer Networks.
- Positions: Member of **ACM**, Member of Rotaract Club.
- Achievements: Smart India Hackathon Winner 2020, President of Rotaract Club.

EXPERIENCE

Columbia University New York, NY Research Assistant — Jun 2024 – Present
- Implemented a **text-based survey tool** using API, collecting real-time agricultural data from **500+ farmers**. leading to a **30%** improvement in disaster risk management through enhanced data-driven decision-making .
- Streamlined database for agricultural data, supporting tailored solutions for local challenges, benefiting **1,000+ farmers**.
- Enhanced a full-stack web application using **Svelte** for front-end development and **DBT** for backend transformation, integrating advanced **data analytics** for optimized agricultural insights by **20%**.

Sumly New York, NY Software Developer Intern — Jun 2024 – Aug 2024
- Developed and implemented a **machine learning prediction model** that reduces transaction misclassification by 30%, enhancing user financial management and tracking accuracy.
- Designed a **decision engine** to optimize tax calculations and deductions for self-employed individuals, resulting in a 25% reduction in time spent on tax preparation, enhancing user satisfaction and retention.
- Constructed and structured the **database architecture** for the product. Developed and deployed a **full stack web application** with a user-friendly interface design and seamless integration of expense tracking features.

Deutsche Bank Pune, India Software Engineer **| Spotlight Award | DB Cloud Engineer** — Aug 2022 – Jun 2023
- Architected a fault-tolerant credit card application in Java, integrating with third-party **Restful APIs** in a **distributed system** environment, launched a checks and audit tool within the trading squad and resolved defects promptly to achieve **100% customer satisfaction**.
- Authored technical documentation of critical business processes and software implementations, collaborating with clients.
- Devised and deployed a **reinforcement learning-based Chatbot**, reducing manual intervention by 40% and improving issue resolution rates by **25%** for the L2 team.
- **Mentored 4 interns**, achieving **98%** task completion using **Agile** methodology, and performed **end-to-end testing**.

PROJECTS

E-commerce Insights: Analyzing Customer Satisfaction and Product Dynamics
- Achieved 68% accuracy and 0.85 AUC-ROC in predicting customer satisfaction using **XGBoost** and **Word2Vec** embeddings.
- Performed multi-class classification to assess business impacts on customer satisfaction, mitigating class imbalances.
- Segmented customers into three distinct clusters based on demographic features and purchase behavior, achieving **98% accuracy**.

Trivia.ai Knowledge Assessment Tool SBU MLH
- Built trivia.ai, a knowledge assessment tool using **Google's PaLM2 LLM model**, achieving a **95%** quiz accuracy.
- Applied a serverless architecture on **Google Cloud Functions**, cutting infrastructure costs by 40% while handling a **50%** increase in user traffic.
- Led cross-functional collaboration, delivering the end-to-end product within a **3-day sprint**, and achieving a **99% user satisfaction** rating.

GitGlance Github Contribution Discovery App
- Engineered a serverless cloud architecture using **AWS Lambda, API Gateway, SQS, and Kinesis** to optimize user interactions, reducing latency by 40% and enhancing scalability for 10K+ concurrent users.
- Applied **S3** for scalable and secure storage, gaining hands-on experience in configuring and optimizing **AWS services** for seamless project execution.

SKILLS

Programming Languages	Java, Python, SQL, C++, HTML5/CSS, JavaScript, Unix, Shell, Typescript
Database	Oracle, MySQL, MongoDB, Neo4j, Firebase, NoSQL, PLSQL, SQL Server, Elasticsearch
Technology and Frameworks	ReactJS, Svelte, SpringBoot, Android, Postman, DBT, Docker, Machine Learning, Natural Language Processing(NLP), AWS, GCP Cloud Computing, Artificial Intelligence, DevOPs
SDLC Workflow and Tools	GitHub, Bitbucket, Agile, JIRA