

Nidhi Baidur

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EDUCATION:

Rochester Institute of Technology

BS Computational Mathematics, Cum Laude

Minor: Computer Science, Immersion: Creative Writing

Rochester, New York
Aug 2020 – May 2024

EXPERIENCE:

Ecolab Inc.

Software Engineer - Prep N Print

Irving, TX
Jul 2024 – Present

Cloud and Backend Engineering

- Contributed to a scalable backend supporting 1B+ labels printed annually, directly impacting \$86M in revenue across 39,263 locations.
- Enhanced system reliability with Azure Traffic Manager, reducing response times by 25% and achieving 99.9% uptime.
- Automated migration of 50M+ rows/day from Azure SQL to Kusto using Apache Airflow, Parquet, Blob Storage, and Event Grid.
- Reduced cloud costs by 40% through architectural optimizations and code efficiency reviews, lowering overall compute resource consumption.

Mobile and Frontend Development

- Migrated the Prep N Print app from Xamarin to React Native,, reducing tech debt and improving maintainability for 36K+ printers.
- Boosted print performance by 70% by integrating Skia, improving image rendering and print accuracy
- Built and optimized CI/CD pipelines using Azure DevOps, automating deployment processes and improving release cycle speed by 20%.
- Collaborated with 3 cross-functional teams, including Product, using Agile methodologies; led daily stand-ups, sprint planning, and retrospectives, improving team alignment and delivery speed.

Rochester Institute of Technology

Applied Machine Learning Research Assistant

Rochester, NY
Jul 2022 – May 2024

- Developed a 95% accurate ML model to forecast the El Nino Southern Oscillation (ENSO) 12 months ahead using complex networks, a first-of-its-kind effort in a historically challenging area.
- Built climate networks using 500K+ sea surface temperature data points over 75 years, optimizing model performance with time series and probability analysis.
- Refined model accuracy through continuous testing and training, incorporating network metrics like eigenvector centrality and local clustering coefficient into the Random Forest algorithm.
- Presented findings** at the **2024 NSBE Conference, RIT Research Symposium (2022-2024)** and recognized with the **Emerson Summer Research Fellowship (2022-2023)**.
- Awarded the **Advanced Certificate of Achievement** , **RIT Undergraduate Scholar** and **Euler Award for Excellence**,for exceptional contribution.

PROJECTS:

MorseCall: Developed a real-time, cross-computer Morse code communication system using Python and socket programming for secure message exchange through the terminal.

Crypto-Inflation Predictor: Built a time series model to analyze the relationship between cryptocurrencies and forward inflation expectation rates, using statistical analysis to predict future trends. **Presented at the 2023 UPSTAT Conference**

SKILLS:

- Technical:** Python, SQL, R, React Native, React, C, C#, ., MATLAB, Git, Bash, Azure
- Development:** Expo, Postman, Azure DevOps, Android Studio, RStudio
- ML and Analysis Tools:** SciPy, Scikit-learn, Matplotlib, NumPy, Pandas, NetworkX, Seaborn
- Concepts:** Model Deployment and Evaluation, Optimization, Data Cleaning and Processing, Statistical Modelling, Time Series Forecasting, Regression Analysis, Artificial Intelligence, App Development, DevOps