

Rishiraj Girmal

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EDUCATION

University of Massachusetts, Amherst

Expected Graduation: May 2027

Master of Science in Computer Science (MSCS)

University of Mumbai, India

July 2019 - May 2023

Bachelor of Engineering in Computer Engineering

CGPA: 9.44/10

Courses: ML, DL, AI, NLP, Data Structures, Algorithms, Database Management, Data Mining

WORK EXPERIENCE

Barclays Bank PLC 

Pune, India

Software Developer 2 (BA4)

March 2025 - July 2025

- *Liro FX Rates:*

Eliminated an upstream dependency by developing Python, Shell and Autosys pipelines to directly ingest **36000+ quarterly Market FX rates** rows for **424 currency pairs** using QAROSTpy(Quantitative Analytics library), enabling daily records updations.

Set up **secure infrastructure** and **environment** on UAT/PROD Linux servers with Kerberos, keytab management, and CyberArk-based IAM for compliant privileged access.

Software Developer 1 (BA3)

July 2023 - February 2025

- *Analytical Review:*

Designed, developed and tested PL/SQL procedures, functions, views, packages, tables and related constraints for **Banking and Trading** Pre - Ledger, Post - Ledger and Exception Drilldown **BS & IS reports**.

Optimized SQL*Loader data loads by reusing FORT configs with **schema synonyms**, avoiding new development and saving time.

- *AE Tool Decommission:*


Migrated AE Tool to FORT, ensuring **US GAAP/IFRS compliance** and seamless transfer of DB objects and historical data.

Optimized insert-heavy processes using cursor-based tuning, **improving performance latency by 40%**.

Developed **Autosys jobs** and conducted technical reconciliation to validate core functionality post-migration.

Finance innovation poc: Implemented AutoARIMA, FbProphet, LSTM for anomaly detection in time series data.

Other activities: Coordinating monthly releases, documenting workflows on confluence and conducting KT sessions.

Takeuforward  | 0.85 million+ YouTube subscribers

Remote

Member of Technical Staff (Intern)

December 2021 - February 2022

- Authored and published **over 14 articles** on their website for Data Structures and Algorithmic problems using C++, Java and Python.

PROJECTS

PIXEMO | Computer Vision, NLP, Keras, ReactJS, NodeJS, ExpressJS, MongoDB, Amazon S3

2022 - 2023

- Developed social media application that generates automatic captions along with emojis for social media posts.

- Led a team of 4 and implemented **encoder-decoder architecture**, Glove vectors, transfer learning for image captioning and **Stacked LSTM architecture** for emoji prediction comparing with GRU, Bidirectional LSTM.

Diablo | MLFlow, DVC, DagsHub, Scikit-Learn

2025

- Built a **fully-integrated ML pipeline** for diabetes classification using a Random Forest model.

EnrichIQ | Microsoft Azure AI Studio, Streamlit, Python

Barclays GenAI '25 Hacks


- Devised a prototype of an AI-powered enrichment platform with an interactive chatbot to automate financial data corrections, with potential to **save 3000+ hours annually** across **180 IB entities**.

BOND AI | Generative AI, Microsoft Azure AI Studio, ReactJS, Javascript, Python

Barclays GenAI '24 Hacks

- Built a tool for **suggesting speculative operations** on interest rate fluctuations for Barclays Decision-Makers for government bond management.

RESEARCH & PUBLICATIONS

Rishiraj Girmal (first author), V. Ambhire, PIXEMO: Captioning Images Along with Emojis for Social Media Applications , International Conference on Recent Advancements in Artificial Intelligence 2023

Rishiraj Girmal (first author), S. Mirjankar, V. Suryawanshi, T. Sarode, Review of Deep Learning Optimizers for VGG-16 and VGG-19

SKILLS

Programming Python, C++, C, PL/SQL, Shell Script, Job Information Language(JIL)

Frameworks Tensorflow(Keras), PyTorch, Flask

Other Git, MLFlow, DVC, Dagshub, Streamlit, Oracle Exadata, UNIX, AutoSys, Microsoft Azure AI