# Niharika Adari

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## EDUCATION

| University of South Florida: **Bachelor of Science in Computer Science** | Tampa, FL |
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- USF GPA: 3.97/4.0 : *Summa Cum Laude* — Aug 2021-Dec 2024
- Vice President: Women in Computer Science Club (WiCSE)

## EXPERIENCE

**Citibank, North America**                                                         Tampa, FL
*Full-Stack Software Engineer*                                          Jan 2025-Present

- Spearheaded AWS cloud migration of 10 out of 20 mission-critical microservices to EKS for a global risk application; resolved 65% of all related defects (15+) to ensure rapid production stability.
- Engineered a production-adopted outbox architecture producing sequence diagrams that identified failure points, defined fallback logic, and established a robust cloud-ready architecture.
- Modernized enterprise data pipelines by migrating 4,200+ Oracle database objects to Aurora PostgreSQL, rewriting incompatible PL/SQL and rebuilding ORM mappings to ensure system-wide data fidelity and compatibility.

**USF SEES Lab Research Assistant*, *Contributor to NSF-funded project**                  Tampa, FL
*"A Framework for the Stochastic Verification of Computation and Communication Systems."*        Jan 2024- Dec 2024

- Developed preprocessing pipelines to extract causality graphs of message-flow patterns from System on Chip communication traces.
- Engineered a pattern-evaluation and ranking pipeline, including acceptance-ratio computation and validation engine; accelerated throughput by 14x through multithreaded batching and pruning heuristics.
- Designed a generalized pattern-removal algorithm to eliminate variable-length sequential patterns from large execution traces, achieving a 400× speedup through hash-table indexing and pointer-based traversal.

**SAS2PY Data Science Intern**                                                       Tampa, FL
*Intern*                                                                   May 2024-Jul 2024

- Recreated complex SAS statistical procedures and data analysis pipelines in Python with Pandas, successfully automating descriptive analytics workflows and improving speed by 5x.
- Developed and containerized an RAG-based LLM chatbot service to enhance internal python workflows.

**USF Teacher Assistant- Data Structures**                                           Tampa, FL
*Teaching Assistant*                                                       Aug 2024-Dec 2024

- Provided 10 hours per week of academic support, assisting the professor with grading exams and offering individualized help to students, including answering questions and clarifying C++ concepts.

## PROJECTS

**[StudyKeet: Full-Stack AI-Powered Study Assistant (Desktop Application)](#)**

- Engineered a learning platform that enables summarization, semantic querying, automated flashcard generation, spaced-repetition workflows using Electron, React, and FastAPI.
- Built a RAG-based evaluation system integrating multimodal content processing for vector-based pipelines using LangChain, Groq inference, SQLAlchemy, HuggingFace embeddings, and ChromaDB.

## HONORS AND AWARDS

- **Dean's List:** Earn semester GPA of 3.90 while full-time, for 4 semesters.        Fall 2021- Spring 2023
- **USF Presidential Award:** Highest merit award based on academic excellence.

## ADDITIONAL

**Technical Skills:** Python, Java, C/C++, SQL, JavaScript, HTML/CSS, R; AWS (EKS, Aurora PostgreSQL), Docker, Kubernetes, OpenShift; PostgreSQL, Hadoop; Spring Boot, React, Flask, Electron; NumPy, pandas, scikit-learn, TensorFlow, PyTorch, Matplotlib, Seaborn, Plotly; Selenium, Cucumber BDD, BeautifulSoup4