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Education

University of Florida, Gainesville, USA   Aug 2024 – May 2026
Master of Science in Computer Science   **GPA: 3.61/4.0**
Relevant Coursework: Generative AI, Data Science, Distributed Operating Systems, Design Analysis & Algorithms
Delhi Technological University, Delhi, India   Aug 2017 – May 2021
Bachelor of Engineering in Software Engineering   **GPA: 3.5/4.0**
Relevant Coursework: Machine Learning, Database Management Systems, Computer Networks, Software Engineering

Skills & Certifications

Languages & Tools: Python, PyTorch, SQL (advanced), Java, Go, Transformers, Pandas, NumPy, Docker, Git

Data & Databases: Databricks, Spark, MLflow, Delta Lake, Apache Airflow, PostgreSQL, MongoDB, Vector DBs (FAISS, ChromaDB)

AI & Analytics: LLMOps, RAG Pipelines, NLP, Document Intelligence, LangChain, OpenAI APIs, Model Deployment

Certifications: Adobe Experience Manager Business Practitioner Professional, Cryptography I (Stanford), Data Analysis with Python (IBM)

Experience

Graduate Research Assistant | **ACIS, University of Florida**   Aug 2025 – Present

- Working on an **A2A** Agent system that validates input using **Pydantic** schemas, performs **asynchronous** API calls to WoRMS with **247K+** species records, structures raw responses into **JSON artifacts**, and passes structured data to **iChatBio**.
- The agent is built on **LangGraph** & the **ReAct (*reasoning and acting*)** framework. It works with **14+** diverse endpoints and features **structured** logging, data caching, and **verifiable** (with the help of artifact generation) responses for the researchers.

Technical Staff | **Adobe**   Apr 2023 – Jul 2024

- Worked as part of the customer engineering team for **Adobe Experience Manager**, developing feature enhancements and platform fixes using **Java**, **Sling**, and **OSGi**.
- Built and deployed AEM **service packs** for enterprise customers across the EMEA region. Debugged issues in **JCR**, dispatcher, and workflow modules, resolving over **97%** of assigned cases.

Software Development Engineer | **Optum, United Health Group**   Jun 2021 – Apr 2023

- As part of Optum's **ORBIT** team, I developed **Power BI** dashboards processing over **2M+ insurance records**. I also worked with **Kubernetes** to write **data processing jobs** across multiple Docker containers with robust **retry** logics.
- Built automated **ETL** pipelines using **Apache Airflow** and optimized their execution time by from **3 days to 4 hours** through optimizing **DAGs** , and fine tuning the **resource** allocation.

Projects

Marine Species Agent | *SDK, Python, Pydantic Models, OpenAI, Instructor*   [Source Code] | 2025

- Developing **ReAct agent framework** integrated with **iChatBio SDK** for biodiversity data retrieval; currently working on improving on LLM's **reasoning patterns** and avoid hallucinations.
- Agent is deployed and accessible for testing at **test.ichatbio.org** - feel free to test and share feedback on performance and improvements.

MCP Web Automation Agent | *Python, OpenAI GPT, Streamlit, Node.js, Puppeteer*   [Source Code] | 2025

- Developed an **browser automation** agent that converts user instructions into executable Puppeteer scripts using **GPT**-generated commands.
- Users enter plain-text commands (e.g., "open Google and search flights") in a **Streamlit frontend**, triggering **real-time** headless browser automatio.

CampusCupid – College Dating App | *Go, React.js, MySQL, REST APIs*   [Source Code] | 2025

- Engineered **backend APIs** and matchmaking logic for a student-focused dating platform supporting real-time interactions and secure data handling.
- Users create profiles, receive match suggestions, and communicate via a **responsive React interface** connected to a **Go-powered backend**.

Movie Genres Classification | *Python, TensorFlow, Keras, CNN, BiLSTM*   [Published Paper] | IEEE, 2021

- First-authored an **IEEE-published paper** using **BiLSTM and CNNs** (ResNet50, VGG16, DenseNet169) to classify movie genres from **IMDB posters and trailers**.