

# AAYOG KOIRALA

☎ (317)-332-1082

✉ aayogkoirala@outlook.com

🌐 linkedin.com/in/aayog

🐙 github.com/Aayog

## 🏠 Objective

Master of Science in Computer Science student with extensive experience in full-stack and Chatbot development. Eager to apply proven project leadership skills and technical expertise to contribute to cutting-edge solutions in a dynamic, full-time role starting this summer.

## ⚙️ Skills

- **Programming Languages:** **Python** (5 years, diverse applications), **Java** (3 years, OOP, desktop & web apps), C++ (3 years, 5+ projects), JavaScript (2 years, web development), SQL (database management), C#, PHP
- **Web Frameworks:** **Django**, **Express.js**, Laravel (2 years, full-stack), Node.js, Spring Boot, Hibernate, React, FastAPI
- **Tools & Technologies:** **Docker**, **Kubernetes** (KIND), **OpenAI API**, MongoDB, Socket.io, MinIO, Cohere, Langchain
- **Cloud Platforms:** **AWS** (EC2, ELB, RDS, S3), Azure (AutoML, Databricks), Google Cloud (Dialogflow)
- **Development Practices:** Agile/Scrum, API Optimization, Scalability Analysis, **Database Caching**, Data Analysis

## 🎓 Education

### Miami University, Oxford, Ohio

*Master of Science in Computer Science, GPA: 4.0, Expected Aug 2024*

**Thesis:** View Synthesis for 360° Panoramic Spherical Images Using Stitched Multiplane Image Corridor

**Relevant Courses:** Machine Learning, Cryptography, High Performance Computing, Advanced Networks

### Miami University, Oxford, Ohio

*Bachelor of Science in Computer Science, Dec 2022*

**Capstone:** Led development team in the Agile-driven creation of a Library's Chatbot, utilizing Google Dialogflow and Node.js.

## 💼 Experience

### AI Chatbot Developer, Miami University, Oxford, Ohio (Jun 2023 - Present)

- Led development of AI chatbot for campus service accessibility; performed **data analysis** strategic reduction in costs by **80%**.
- Implemented **Weaviate vector database** for data caching, **reducing server load by 40%**, and developed a React-based UI.
- Engineered a **scalable backend** with Typescript and **Node Express**, integrating **Socket.io** real-time communication and optimizing OpenAI token usage with Cohere API.

### Software Developer, Miami University - Myaamia Center, Oxford, Ohio (Jan 2023 - Present)

- Designed API integration between the Ethnobotanical Database and Myaamia Dictionary App, enhancing linguistic data access and contributing to the upgrade of educational platform analytics.
- Improved the Eduportal admin UI and Mailtrap integration for scholarship management, and led the AWS S3 migration for the ELF Grant Management Application.

### Teaching Assistant, Miami University, Oxford, Ohio (Aug 2022 - Dec 2022, Feb 2021 - May 2021)

- Facilitated lab sessions focusing on clear communication and problem-solving, **mentored Agile-based student projects**, and provided feedback to improve student skills for Intro to Software Engineering and OOP class.

### Healthcare Analytics Intern, Community Health Network, Indianapolis, Indiana (Jun 2021 - Jun 2022)

- Chosen (**out of 2200+ applicants**) nationwide for TechPoint Xtern program.
- Led data analysis initiatives to assist Chief Analytics Officer, used **Azure ML** to develop **patient readmission predictive model**.

### Java Intern Developer, Nepdroid Innovations, Kathmandu, Nepal (Jan 2018 - Jun 2018)

- **Directed** a team for the delivery of **production-ready Java** projects, promoting **team collaboration** and meeting deadlines.

### Volunteer Teacher, Shree Bhawani Vidhyapeeth, Parbat, Nepal (Jun 2017 - Sep 2017)

- Provided English and Mathematics education to 150+ students, enriching the learning environment of a rural community.

## 💻 Projects

- *DoctorsToday*: Architected a Node.js API leveraging MinIO for S3-like storage, MongoDB and MySQL. Achieved 60% improvement in data retrieval speed and efficient data management; orchestrated within Docker containers for streamlined deployment and scalability.
- *LazyEyeScroller*: **Award-winning Python script** from MLH hackathon utilizing eye-tracking for social media control.
- *Movie Ticketing Web Application*: Led deployment of **Java Spring** web app; focused on database integrity and security.
- *Dynamic CMS*: Engineered a **Django RESTful CMS**, enhancing scalability and content management, facilitating effortless content updates and navigation.
- *Nepali Weddings Website*: Implemented **Kubernetes (KIND)** deployment for a PHP, HTML, CSS, JavaScript website for learning purposes, previously deployed using Docker.
- *Miscellaneous Self-Projects*: Engaged in diverse personal development projects, including backend of **NewZoidTimes**, a **Spacy**-based Python backend for headline synthesis, and GUI applications like Tic-Tac-Toe in **TKinter** and a Calculator in **JavaFX**.

## ★ Awards and Honors

- *Dean's List* - Miami University (Fall 2019, Spring 2020, Fall 2020, Spring 2021).
- *Best Script* - MLH-hosted Hackathon, University of Indianapolis, 2018.
- *Martial Arts* - Shito-Ryu Karate Shodan (Black Belt).