

# Ayush Yadav

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## Summary

Computer Science undergraduate at Miami University (GPA 3.46) with ITSM Data Integration internship experience building Python/SQL pipelines on 1M+ row datasets, Tableau dashboards, and workflow automations. Proficient in Python, Java, C++, JavaScript/TypeScript, React, and SQL, with projects spanning an iOS LiDAR accessibility app, an AutoML senior capstone platform, and a SIMD/OpenMP-optimized MNIST neural network. Seeking software engineering/data roles.

## Education

**Miami University, Oxford, OH** | Bachelor of Science in Computer Science — Expected May 2026

GPA: 3.46 (Dean's List: Fall 2023, Spring 2025, Fall 2025) | Dept GPA: 3.68 | Major GPA: 3.42

### Relevant Coursework:

- CSE 385 – Database Systems: Relational modeling, normalization, relational algebra, SQL
- CSE 432 – Machine Learning: Data processing, predictive models, term project on large datasets
- CSE 443 – High Performance Computing: Parallel programming on multiprocessors and clusters
- CSE 484 – Algorithms II: NP-completeness, approximation & randomized algorithms

## Technical Skills

- Languages: Python, Java, C++, JavaScript, HTML, CSS, SQL
- Frameworks/Libraries: React, Tauri, NestJS, Prisma, Zod, SwiftUI, ARKit, Vision, OpenMP, PyTorch, Scikit-learn
- Tools: Git, Visual Studio Code, Eclipse, Xcode, Linux/Unix CLI, Google Colab

## Projects

- **AutoML – Automated Data Scientist Platform (Senior Capstone, Ongoing; May 2026)**
  - RAG + MCP platform for domain-tuned ML services (deploy + monitor).
  - Automated training: HPO/multi-model search + SFT; containerized runs.
  - TS monorepo: React (Vite), Express, Postgres, Playwright evals.
- **Visual Assist – iOS LiDAR Visual Assistance App (Ongoing; January 2026)**
  - On-device iOS LiDAR navigation with depth scan + audio/haptics.
  - Vision OCR + object awareness; VoiceOver + voice commands.
  - Wearable planned; current version targets iOS LiDAR devices.
- **LifeQuest – Quest-Based Routine & Community Platform (April 2025)**
  - Desktop quest platform turning routines into missions for job loss/retirement.
  - Tauri + React + NestJS (Postgres/Prisma) for quests, progress, rewards.
  - Future iOS app will add map-based quest experience.
- **Fast MNIST NN – High-Performance C++ Neural Network (HPC Final Project, November 2025)**
  - Collaborated on C++17 MNIST NN with SIMD kernels + OpenMP hot paths.
  - CLI train/eval pipeline; cached MNIST loader for repeat runs.
  - Catch2/CTest, Google Benchmark, CI, Doxygen, clang-format.
- **Dynamic Calendar Application (December 2023)**
  - Collaborated on calendar tool with notes, reminders, location-aware scheduling.
  - Integrated external APIs for dynamic address fetching.

## Experience

- **ITSM Data Integration Student Associate (Intern) – Miami University (Jun 2025 – Present)**
  - Built Python/SQL pipelines for 1M+ row datasets; analyzed trends and KPIs.
  - Delivered Tableau dashboards with actionable insights for IT/non-IT teams.
  - Built Workday/OAS/Tableau report inventory + API-integrated Slack bot.
- **Student Worker – Market Street at MacCracken (Aug 2023 – Dec 2023)**
  - Supported checkout and grill operations; maintained accurate service and safety standards.

## Leadership & Activities

- **Volunteer Teacher – USM, Indore, India (2017–2018):** Taught basic education to underserved children, promoting literacy and inclusion.
- **Finalist – MUCAT Design Innovation Competition (Feb 2025):** Selected as finalist team; authored LiDAR visual assistance proposal (foundation for Visual Assist).
- **4th Place – Social Innovation Weekend (Mar 2025):** Built user-centered solutions to loneliness/isolation; placed 4th among interdisciplinary teams.