

PIERRE DIATTA

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Education

Berea College

B.S., Computer Science and Biochemistry

Aug 2024 - Dec 2028

- **GPA:** 3.92

- **Achievements:** Tuition Promise Scholarship (\$200,000+), Dean's List (All Semesters), #1 in Senegal National Exam, Pugsley Math Award, YES Scholar

- **Coursework:** Data Structures & Algorithms (IP), Harvard CS50, Organic Chemistry, Analytical Chemistry, Calculus I

Technical Skills

- **Software Development:** C++, Python, JavaScript, Go, Software Design

- **Web Development:** React, HTML5, CSS3, SCSS/Sass, Flask

- **Data & Analysis:** Pandas, NumPy, Matplotlib, Excel (regression & error propagation), REST APIs

- **Laboratory Techniques:** 1H NMR, IR, UV-Vis, AAS, TLC, chromatography, distillation, reflux

Projects

Intern Hub

Aug 2025 - Present

- Scraped and processed 10,000+ internship listings using Python, BeautifulSoup, and a fault-tolerant crawling pipeline.

- Built an O(nlogn) ranking engine improving query speed by 55% and boosting filter accuracy across 3+ criteria.

- Developed a Flask REST API powering a React UI, enabling real-time search with sub-200ms latency.

- Added automated daily refresh pipeline reducing manual data updates by 90%.

PivyBot AI-Powered Study Assistant

Jul 2025 - Present

- Created NLP chatbot using logic-based intent detection and pattern-matching across 20+ academic help intents.

- Improved response accuracy by 40% through input normalization, structured templates, and fallback logic.

- Designed modular architecture enabling future LLM API integration for contextual tutoring.

- Implemented session-based memory enabling multi-turn reasoning and personalized learning feedback.

Environmental Iron Analysis

Aug 2025 - Present

- Analyzed 150+ UV-Vis/AAS readings to quantify Fe with reproducibility within ±3%.

- Prepared calibration curves ($R^2 > 0.998$) and ran error propagation, Q-tests, and variance checks.

- Built automated regression templates in Excel/Python reducing calculation time by 70%.

- Co-authored a 12-page technical report detailing methodology and environmental interpretation.

Experience

Berea College

Mathematics Teaching Assistant

Aug 2024 - May 2025

Berea, KY

- Built an automated grading pipeline using Python and Pandas to grade 150+ assignments, providing targeted feedback and contributing to a 15% improvement in class performance.

- Tutored 10+ students weekly; 80% improved by at least one letter grade.

- Hosted weekly problem-solving sessions boosting homework completion rates by 25%.

Berea College

Student Manager, Facilities

Jan 2025 - Present

Berea, KY

- Supervise 20+ student workers and coordinate 50+ events with high logistical precision.

- Designed onboarding workflows using software design principles, reducing new-hire training time by 25%.

- Developed and implemented a digital tracking system using Go, reducing task turnaround time by 18%.

Berea College

Chemistry Laboratory Coursework

Jul 2024 - 2025

Berea, KY

- Characterized compounds using 1H NMR, IR, and UV-Vis.

- Performed chromatography, oxidation reactions, and metal quantification via Flame AA.

- Maintained digital lab notebooks with 100% compliance to scientific documentation standards, improving data accessibility for decision-making.

American Councils

YES Program City Representative

Aug 2023 - Jul 2024

Senegal

- Organized STEM workshops impacting 270+ students across underserved schools.

- Mentored 200+ youth in English fluency and U.S. college readiness.

- Collaborated with U.S. Embassy partners to expand educational outreach, strengthening data-driven decision-making for program improvements.