**Nathan Johnson**

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**Education**

**Loyola University of Chicago**  Chicago, IL *B.S. Computer Science*  Expected Graduation: May 2026 **GPA:** 3.94 **Relevant Coursework:** Data structures and Algorithms, Discrete Math, Calculus I & II, Linear Algebra, Computer Systems, Programming languages. **Future Coursework:** Operating Systems, Object-Oriented Design, Database Programming, NLP, ML

**Experience**

**Argonne National Laboratory**  Lemont, IL*Computational Research Aide | Sophomore*  May 2024 – August 2024

* Analyzed large-scale datasets on HPC clusters, leveraging Python (Pandas) for data wrangling and exploratory analysis, generating insights to guide performance optimizations.
* Helped develop automated data pipelines within an HPC environment, streamlining ETL workflows for large-scale scientific computations.
* Conducted testing and validation routines (cProfile, unit tests) to ensure accuracy and reliability across distributed data flows.
* Leveraged HPC concurrency tools (OpenMP, mpi4py) to optimize pipeline performance; gained valuable insights into system scalability and distributed data handling.

*Computational Research Aide*  May 2023 – August 2023

* Investigated concurrency improvements (OpenMP, mpi4py) for data processing tasks, reducing compute times on HPC nodes.
* Documented pipeline design decisions and results, promoting best practices in data engineering and HPC automation.

**TrueLayer**  London,UK  *Business Development Intern* January 2025 – Present

* Analyzed partner and market data using Python and basic visualization libraries (matplotlib, seaborn).
* Collaborated with technical teams to explore leveraging AI insights for predictive financial modeling.

**Loyola University of Chicago** Chicago,IL  *Loyola AI Club President* August 2023 – December 2024

* Led club projects focused on data extraction, preprocessing, and basic ML model training (TensorFlow/scikit-learn).
* Organized workshops on data wrangling (Python, SQL), pipeline automation, and fundamental MLOps concepts (CI/CD for ML).
* Oversaw version control with Git, implementing branching and code review processes to maintain code quality.

**Skills**

* **Programming/AI:** Python (NumPy, Pandas, scikit-learn), SQL, C++
* **ML/AI Frameworks:** PyTorch, TensorFlow (basic),
* **Data Engineering:** ETL processes, data pipelines, concurrency (OpenMP, mpi4py), HPC workflows
* **Tools/Platforms:** Git, Docker, AWS, Spark/Hadoop (basic exposure)
* **Data Visualization:** Tableau, matplotlib, seaborn