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, Machine Learning

Experience

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

- Collaborated on the ARCHES project under the CPS division, focusing on GPU offloading using SYCL for performance-critical applications on the Aurora supercomputer.
- Conducted code profiling and bottleneck analysis using MAQAO, improving parallel computation workflows.
- Demonstrated effective team leadership by coordinating optimization strategies with cross-functional research teams, aligning technical solutions with project milestones.

Computational Research Aide   May 2023 – August 2023

- Developed Python-based HPC workflows (CPS division), employing mpi4py to facilitate distributed, parallel computing.
- Integrated C/C++ libraries into Python using ctypes and pybind11, enhancing performance for large-scale data operations.
- Strengthened knowledge of object-oriented design, concurrency, and distributed systems—elements directly relevant to query engine development.

TrueLayer   London, UK
Business Development Intern   January 2025 – Present
- Conduct data-driven market analysis to inform strategic partnerships, sharpening analytical and problem-solving skills.
- Utilized cross-functional teamwork and technical knowledge to support product roadmaps, reinforcing collaborative coding and agile work practices.

Loyola University of Chicago   Chicago, IL
Loyola AI Club President   August 2023 – December 2024
- Led a team to develop a movie recommendation system using Pandas, NumPy, and Scikit-learn, demonstrating proficiency in algorithm design, data structures, and performance optimization.
- Oversaw weekly meetings, workshops, and guest lectures, managing a growing club community.

Skills
- Programming Languages: C++, Python, Java, Scala, Ruby
- Core CS Fundamentals: Algorithms, Data Structures, Operating Systems, Object-Oriented Design
- Distributed & Parallel Computing: OpenMP, SYCL, MAQAO, mpi4py, HPC workflows
- Database & Data Processing: Interest in relational databases, vectorization, and high-performance query execution