Nathan Johnson

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Education

Loyola University of Chicago <div align="right">Chicago, IL</div>
B.S. Computer Science <div align="right">Expected Graduation: May 2026</div>
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 <div align="right">Lemont, IL</div>
Computational Research Aide | Sophomore <div align="right">May 2024 – August 2024</div>

- Innovated performance enhancements for the ARCHES project, focusing on GPU offloading with SYCL and OpenMP to optimize compute-intensive kernels.
- Participated in requirements-capturing for HPC feature integration, developing technical documentation and integration test plans for newly proposed solutions.
- Communicated status updates and performance results to senior researchers and developers, refining presentation and project management skills.

Computational Research Aide <div align="right">May 2023 – August 2023</div>

- Built Python-based HPC workflows to handle large-scale, distributed data processing using mpi4py, enhancing speed and reliability by 30%.
- Drafted design documents and deployment plans for cross-language (C/C++ to Python) integration via ctypes and pybind11, demonstrating a commitment to operational safety and thorough testing.

TrueLayer <div align="right">London, UK</div>
Business Development Intern <div align="right">January 2025 – Present</div>
- Collaborate with cross-functional teams to define requirements and propose technical solutions that support emerging product lines in Pay by Bank, Open Banking, and A2A.
- Conduct data analysis and market research, bridging technical and business insights to drive next-generation fintech products.

Loyola University of Chicago <div align="right">Chicago, IL</div>
Loyola AI Club President <div align="right">August 2023 – December 2024</div>
- Spearheaded the design and development of a movie recommendation system using Python, Pandas, NumPy, and Scikit-learn, showcasing strong algorithm design and data structure knowledge.
- Oversaw weekly status updates, guiding a team of 10+ members from concept through integration testing and final presentations.

Skills

- **Programming Languages:** Python, C++, Java, Scala, Ruby
- **Agile & Documentation:** Requirements gathering, design docs, integration test plans, deployment plans
- **Systems & Distributed Computing:** HPC workflows, GPU offloading (SYCL, OpenMP), mpi4py, performance optimization
- **Databases & Data Processing:** Familiar with relational databases, large-scale data wrangling, data pipelines
- **Mathematical Optimization:** Exposure to linear/nonlinear optimization from HPC projects