Nathan Johnson

Chicago, Illinois | njohnson14@luc.edu | 331-229-1644 | GitHub | LinkedIn

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

- Contributed to the ARCHES (Argonne Configuration Interaction for High-Performance Exascale Systems) project under the CPS division.
- Specialized in GPU offloading using SYCL for the Aurora supercomputer, focusing on performance-critical applications.
- Performed code profiling and bottleneck analysis using MAQAO, identifying and implementing optimizations for computational kernels.
- Applied OpenMP threading to parallelize workloads effectively, enhancing the scalability and efficiency of the codebase gaining extensive experience in high-performance computing (HPC).

Computational Research Aide May 2023 – August 2023

- Assisted in the developing Python-based HPC workflows for the CPS division.
- Conducted benchmarking using cProfile and optimized parallel computation with mpi4py.
- Integrated C/C++ libraries into Python workflows using ctypes and pybind11, streamlining performance-critical operations.
- Enhanced understanding of cross-language performance optimization and parallel programming paradigms.

TrueLayer London, UK

Business Development Intern January 2025 – Present

- Acquired hands-on experience in the dynamic, fast-paced FinTech industry, working in a global business environment.
- Conducted data analysis within the Commercial division to identify and evaluate potential strategic partnership opportunities.

Skills

- **Programming Languages:** Python, C++, Java, Scala, Ruby.
- **HPC and GPU Computing:** OpenMP, SYCL, MAQAO, mpi4py.
- **Performance Optimization**: Code profiling, threading, and heterogeneous computing.