Nicholas M. Synovic - Resume

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# Education

* **Ph.D in Computer Science** Jan 2024 - Present  
  *Loyola University Chicago*
* **M.S in Computer Science – Concentration in A.I.** Aug 2022 - Dec 2023  
  *Loyola University Chicago*
* **B.S in Computer Science** Aug 2018 - May 2022  
  *Loyola University Chicago*

# Experience

**Graduate Computer Science Research Assistant** May 2022 – Present*Loyola University Chicago, Department. of Computer Science*

* Execute and disseminate research on pre-trained deep neural network models (PTMs) and their encompassing software supply chains at premier international forums with a multi-institute team with a 7 paper track record.
* Mentor peers in the graduate lab to foster sustainable and efficient methodologies for the adaptation and application of AI/ML within the scope of software engineering.
* Collaborate with the laboratory's leadership to establish and uphold comprehensive standards in software engineering, scholarly composition, and project management to facilitate ongoing progress and exploration of novel research areas.

**Master’s Research Assistant** May 2023 – Aug. 2023

*Argonne National Labs, Argonne Leadership Computing Facility*

* Leverage national supercomputing facilities to investigate provenance methodologies that trace the evolution of adapted pre-trained deep neural network models (PTMs) and identify new methodologies for processing and empirically evaluating and comparing PTMs.
* Educate undergraduate and graduate researchers in utilizing heterogeneous high-performance computing, AI accelerator technologies, and advanced software engineering practices.
* Develop, utilize, and publish in academic conference proceedings empirical software engineering research regarding the development history, application utilization, and engineering understanding of PTMs.

IS/IT Developer Analyst May 2021 - May 2022

*Medline Industries, Inc.*

* Developed Business Applications: Leveraged Oracle and OutSystems software and databases to create business applications

that facilitated internal processes, including talent identification and planning, enhancing operational efficiency.

* Collaborated with Stakeholders: Worked alongside IT and business stakeholders to develop applications using Agile practices,

ensuring customer satisfaction and application completeness.

* Provided On-Call Support: Offered 24/7 on-call support for business operations across various projects and business groups,

maintaining seamless business operations and minimizing downtime.

# Skills

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| * Software engineering for LLMs on national and industry heterogeneous high-performance resources platforms with Python, C++, TensorFlow, and PyTorch | * Business, technical, and scientific written and verbal communication that fosters and facilitates cross-organization team collaboration |
| * Experienced with MySQL, PostgreSQL, Firebase, and SQLite databases, data pipelines, and full-stack applications | * Independently driven while maintaining communication and promoting application ownership within diverse teams |
| * TDD and requirements-oriented software engineering practitioner | * Efficient translation and requirements engineering of business goals into actionable tasks |
| * Proficient in Java, Python, C, C++, SYCL, HTML, CSS, JavaScript, and Linux shell scripting | * Detailed and correctness-oriented mindset that critically questions analyzes, and tests results |