

# Joseph Dwyer

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## PhD Candidate: Computer Science | Focus: LLM Parameter Optimization

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### KNOWLEDGE, SKILLS, & ABILITIES (KSA)

#### Primary Programming Languages:

C/C++ with STL and MPI, JAVA SE, SQL

#### Secondary Programming Languages:

Prolog, Lisp, C#, Objective C, .Net, PowerShell

#### Other Languages:

HTML, CSS, JavaScript, JUnit Testing,

AJAX, JSON, Hibernate

#### AI/ ML Tools:

Docker, Docker Compose, Python, PyTorch,

Anaconda Navigator, Jupyter Notebooks

#### Operating Systems:

Windows, Mac OSX, Linux

#### Build Tools: Maven, Ant

#### Integrated Development Environments:

Eclipse, Net Beans, XCode, Visual Studio

#### Version Control:

Subversion, Team Foundation Server, GitHub

#### Cloud Environments:

AWS/ SageMaker

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### PROFESSIONAL OVERVIEW

**Computer Information Systems (CIS) Program Director** | ECPI University | March 2016 – Present  
**Project Manager, Lead SharePoint Developer, Scrum Master** | eTRANSERVICES, LLC | Oct. 2015 – Feb. 2016

**Lead SharePoint Designer & Software Developer** | Expert Consultants, Inc. | Dec. 2012 – Sept. 2014

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### EDUCATION & RESEARCH EXPERIENCE

**PhD Candidate, Doctor of Philosophy: Computer Science** | National University | In-Progress  
*Dissertation: A Quantitative Experimental Study on Exploring Parameter Efficiency with Varying Token Counts in OpenLLaMA Training*

*Investigates compute-efficient training strategies for LLMs using edge computing (NVIDIA Jetson AGX Orin)*

*Grounded in scaling laws (Kaplan et al., Hoffmann et al.) and Big O Theory*

*Chapter 1 accepted; currently authoring Chapter 2*

**Master of Science in Computer Science** | Hood College | Frederick, MD | 2010  
*Research: Parallel Programming, Fall 2008 | Presented an Implementation of the Gauss – Jordan Algorithm using MPI at CCSC Eastern Conference*

**Bachelor of Science in Mathematics** | George Mason University | Fairfax, VA | 2005  
*Research: Long Range Interaction Potentials, Fall 2004 | Presented on the*

## **CERTIFICATIONS**

**Advanced Certified Scrum Master** | Scrum Alliance | September 2022

**CompTIA IT Fundamentals (ITF+)** | CompTIA | June 2020

**MTA: Software Development, Fundamentals** | Microsoft | May 2020

**Security + CE** | CompTIA | September 2015

**Certificate of Professional Development: Client Programming** | O'Reilly | January 2013

**Sun Certified Associate, Java Platform, Standard Edition** | Sun Microsystems | August 2010

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## **DETAILED PROFESSIONAL EXPERIENCE**

**CIS Program Director** | East Coast Polytechnic Institute (ECPI) University

Glen Allen, Virginia | March 2016 – Present

- Facilitated and engaged with Henrico County Public Schools over the local Dual Enrollment program.
- Guided, mentored, and championed students through their Computer Information Systems degree.
- Garnered support within the local community over eSports presence; managed eSports arena.

**Project Manager, Lead SharePoint Developer, Scrum Master** | eTranservices, LLC

Fredericksburg, Virginia | October 2015 – February 2016

- Guided operations around Team Foundation Server; supported as a centralized code repository and project management tools and offered ad hoc reporting and presentation.
- Engaged in change management in support of clients; refined and automated the CCB Charter process.
- Optimized, initiated, and crafted standard operating procedures (SOP) over management, Software development and service desk ticket resolution processes; implemented Scrum methodologies, which improved communication between internal teams and external stakeholders.

**Lead SharePoint Designer & Software Developer** | Expert Consultants, Inc.

Frederick, Maryland | December 2012 – September 2014

- Mentored and trained junior designers; set design standards for revisions, provided team education, and acted as the main point of contact to disseminate information from management to implementation.
- Developed high-quality business solutions and delivered ahead of project deadlines; crafted multiple SharePoint solutions, which acted as the technical standard and exceeded expectations.
- Improved operations and efficiency with the development of a new tuition reimbursement feature under the company portal; utilized the following programs and systems for prototyping and database design: HSQL, SQL, Hibernate, Spring Frame Work, JSP, HTML, Junit, and more.

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## PUBLICATIONS & WORKS

Prior, Y., West, J., & Dwyer, J. (2023, July). *Technology and stress: A qualitative case study with Gen Z workers*. Poster presented at the APA Annual Convention. [ResearchGate](#).

- Examined technostress in Gen Z employees; contributed to analysis and poster development as third author

Dwyer, J. (In Progress). *A Quantitative Experimental Study on Exploring Parameter Efficiency with Varying Token Counts in OpenLLaMA Training*. Dissertation, National University.

- Experimental research on training token variation using edge devices for LLM efficiency

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## ACHIEVEMENTS

**Leadership Institute Graduate** | ECPI University | 2024

**Faculty of the Year** | ECPI University | 2023, 2017

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