Thavishka Gamage

Cincinnati, OH | +1 (513) 818-5925 | gamagetd@mail.uc.edu | LinkedIn | GitHub | Portfolio

EDUCATION

University of Cincinnati **Cincinnati, OH**

Master of Engineering, Industrial and Systems Engineering | Data Science | GPA:4.00/4.00 *Graduation Date: May 2026*

- Data Science specialization with coursework in Artificial Intelligence, Machine Learning, Cloud Computing, Deep Learning
- Graduate Incentive Award | Dean's List, Full Academic Tenure | Golden Key Honor Society

Bachelor of Science, Computer Science | GPA: 3.7/4.0 *Graduation Date: May 2025*

- International Outreach & Global Scholarship | Dean's List, Full Academic Tenure | Golden Key Honor Society | Phi Theta Kappa Honor Society | Innovation Challenge - 2nd Place
- Relevant Coursework: Artificial Intelligence, Data Structures, Design and Analysis of Algorithms, Operating Systems & Systems Programming, Programming Languages, Database Design, Large Scale Software Engineering, Discrete Computational Structures
- Senior 100, 2025 Cohort: Selected for exceptional academic achievements and extensive involvement on campus

WORK EXPERIENCE

University of Cincinnati, College of Engineering and Applied Science **Cincinnati, OH**

Research Assistant, Multi-Agent LLM System; Advisor: Prof. Tommaso Giovannelli *October 2025 - Present*

- Conduct research on multi-agent large language model (LLM) systems for coordinated reasoning, emergent behavior, and optimization in complex socio-technical tasks
- Design and evaluate cooperative and competitive LLM agents using Chain-of-Thought prompting, meta-reasoning, and bilevel optimization, with custom frameworks built in Python and PyTorch
- Develop AWS Lambda and custom inference pipelines to simulate distributed decision making, supporting ongoing work toward publications on multi-agent coordination and AI-driven systems engineering

Integrated Therapy Software (TheraThrive) - Senior Design Capstone **Cincinnati, OH**

Project Lead, Computer Science *August 2024 - May 2025*

- Led a cross-disciplinary team to design and implement a full-stack AI chatbot delivering guided CBT-style sessions for users with depression, low motivation, and social withdrawal
- Built a React.js frontend and Django/Python backend integrated with the OpenAI API and PostgreSQL to manage user sessions, prompts, and conversation history
- Defined functional requirements, data models, and evaluation criteria, then coordinated usability testing and iteration on conversation templates to improve engagement and clarity of AI feedback

Insight **Cincinnati, OH**

Business Analyst Co-op *May 2024 - August 2024*

- Orchestrated 10+ cross-functional stakeholder sessions and requirement reviews, producing user stories, technical documentation, and Power BI dashboards that improved team clarity, reduced redundant clarification cycles, and aligned development outcomes with business goals across Insight's enterprise service operations and internal product delivery teams
- Spearheaded Agile backlog management for two concurrent projects, wrote over 30 structured user stories with acceptance criteria, prioritized tasks with product owners, and facilitated stand-ups and retrospectives to address blockers and improve delivery speed while aligning with stakeholder expectations and cross-functional dependencies
- Devised and launched an automated SLA reporting system using Power BI and ServiceNow exports, eliminating manual Excel reconciliation, introducing consistent weekly dashboards, and supporting ITIL-aligned compliance tracking and service performance visibility across internal operations and external-facing enterprise support metrics

SHP **Cincinnati, OH**

Computer Science Co-op *August 2023 - December 2023*

- Spearheaded development of 15+ custom AutoCAD Revit functions using C#, automating design tasks to reduce manual effort, accelerate modeling, and standardize drafting output across commercial and residential architecture projects
- Collaborated with architects and developers to gather requirements, implement tooling updates, and test integrations, ensuring new functions met project goals, improved modeling speed, and integrated smoothly into Revit workflows used across active projects
- Participated in Agile development cycles with a 30+ person team, contributing to sprint planning, backlog prioritization, and daily stand-ups while supporting timely delivery of Revit updates that addressed architectural challenges and improved modeling speed

University of Cincinnati, College of Engineering and Applied Science **Cincinnati, OH**

Undergraduate Research Co-op Fellowship *January 2023 - April 2023*

- Conducted Topological Data Analysis (TDA) research focused on Persistent Homology (PH), contributing to 5+ projects by analyzing high-dimensional data patterns and structures using both theoretical methods and applied computational frameworks
- Developed and maintained Python and C++ scripts to collect, process, and analyze performance data from TDA experiments using real and synthetic datasets, improving consistency and reproducibility across research results
- Managed a Linux-based compute cluster for TDA workloads, allocating resources efficiently, troubleshooting errors, and ensuring stable execution of large-scale experiments while supporting research meetings and team collaboration

Procter & Gamble, UC Simulation Center **Cincinnati, OH**

Software Engineering Co-op *May 2022 - August 2022*

- Developed and debugged 3 custom JMP-based applications to support hybrid production systems, reducing manual effort and improving workflows used daily by over 50 plant engineers and operators

- Redesigned internal application interfaces based on stakeholder feedback, enhancing usability and functionality across tools used in production workflows, and improving adoption through targeted layout and performance updates
- Collaborated with global P&G teams to implement software updates, aligning changes with international standards and validating functionality through coordinated frontend and backend testing

SKILLS

Programming and Technical: Python, PyTorch, C++, C#, SQL, JavaScript, jQuery, R, MATLAB, VBA, LabVIEW
Data and AI: Multi-agent LLM systems, deep learning, chain-of-thought prompting, experiment design and evaluation, topological data analysis, JMP
Web and Backend: Django, React.js, HTML, CSS, Bootstrap, REST APIs, OpenAI API
Cloud, Data, and BI: Amazon Web Services (AWS, including Lambda), Power BI, Tableau, PostgreSQL, Excel, ServiceNow
Tools and Platforms: Docker, GitHub, GitLab, JIRA, Visual Studio, VS Code, PyCharm, Microsoft Office, Google Workspace, SharePoint, Miro, Figma
Modeling and CAD: Fusion 360, AutoCAD, Autodesk Revit, Ultimaker Cura, 3D printing workflows
Project Management: Agile methodologies (Scrum, Kanban), sprint planning, user story development, backlog management, stakeholder workshops

PUBLICATIONS

- Impact-Team, Hella. "Preliminary Design Review." (2020).
- Gamage, Thavishka et al, “On-Chip Nano Plasmonic Blood Based Assay Cartridge.” (2020).