

Michael Kurilko

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Education

Marist University — Bachelor of Science in Computer Science (Software Development), Honors College
Poughkeepsie, NY | GPA: 3.94 | Dean's List | Dean's Circle | Expected May 2027

Skills

- **Languages:** Python, Java, JavaScript (Node.js, React, React Native), C++, SQL, Lua, HTML/CSS
- **Frameworks & Tools:** AWS, Git, Postgres, MongoDB, Neo4j, Express.js, Socket.io, PyTorch, Streamlit, Angular
- **Systems & ML:** Probabilistic modeling, record linkage, ensemble learning, transformers, graph algorithms
- **Certifications:** IBM Python for Data Science, AI & Development

Experience

Software Engineering Research Fellow *Tributary | Poughkeepsie, NY*

June 2025 – Aug 2025

- Engineered a probabilistic identity resolution system in Python using ML and graph-based approaches, improving detection of duplicate profiles.
- Built a synthetic dataset generator simulating real-world data imperfections (typos, nicknames, missing fields) for model benchmarking.
- Implemented and evaluated Gradient Boosted Trees, Transformer architectures, and Fellegi-Sunter models, achieving a composite ensemble with superior precision-recall balance.
- Contributed to Tributary's platform integrity by developing trust algorithms (SybilRank, SybilGuard), refactoring the Angular frontend, and optimizing the Neo4j graph database.
- Co-authored a research paper (awarded 1st in AI/ML at MHVTM): Deduplication and Probabilistic Record Linkage: A Comparative Study... (2025), presenting a reproducible pipeline and visualization dashboard for identity resolution

IT Student Worker *Marist Information Technology | Poughkeepsie, NY*

Aug 2024 – Present

- Deployed over 100 computers and managed the reimaging process.
- Collaborated with the IT team to streamline technical support ticketing.

Projects

Recipe & Meal Planning App (React, Postgres, Spoonacular API) — Built a full-stack meal planning app with authentication and personalized UI; increased DAUs by 30%.

Apollo (C++, SFML) — Designed a custom C++ pseudo-shell and GUI/TUI environment using SFML, enabling configurable commands and portable directory-based execution.

LucidAI App (JavaScript, Node.js, React Native) — Built an iOS and Android app to help users achieve lucid dreaming, analyze hidden meanings/messages in their dreams, sleep better, and generate AI images and video dreamscapes all with a fine-tuned AI model.

Real-Time Collaborative Scripting Environment (React, Node.js, Lua, Socket.io) — Built a real-time collaborative code editor enabling simultaneous scripting for Roblox developers.

Honors & Awards

- FBLA Website Design — 1st Place (State Level)
- 1st Place, AI/ML Research — MHVTM Conference (2025)