Yosef Shammout

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Incoming Software Engineer, Ford Motor Company Accepted return offer, Sep 2026

EDUCATION

Wayne State University Detroit, MI
B.S. Computer Science Expected Dec 2026
Cumulative GPA: 3.63/4.00 | Computer Science GPA: 3.80/4.00
Dean's List: Winter 2024 and Winter 2025
Research interests: Language-model memory and reasoning; structured knowledge and retrieval; reliable evaluation.

RESEARCH EXPERIENCE

eICU-KG Wayne State University
Undergraduate Research Assistant; Advisor: Dr. Lihui Liu Oct 2025 - Sep 2026

- Constructed eICU-KG to evaluate common and long-tail medication-concept ranking: a transductive edge-recovery benchmark using ICU records and 147 candidate concepts; jointly developed the research direction with Dr. Liu.
- Engineered a deterministic pipeline for ingestion and graph construction, with patient-disjoint target splits and audits excluding held-out answer links from training.
- Compared five baseline families, including graph embeddings and RGCNs. The diagnosis-frequency prior reached 61.7% Hits@10 overall and 2.4% on HARD, the subset outside the ten most frequent training concepts; ties share rank.
- Developed CSR-HARD, an evaluation-only case study with known HARD membership. Selecting 7% of HARD queries for RGCN reranking increased mean top-10 hits from 46 to 58.7 of 1,886 (+27.5%) across three gate seeds; head rankings remained unchanged.

First-author manuscript. Accepted for poster presentation, AIDaR Workshop at NeurIPS 2026:
"eICU-KG: A Leakage-Audited Clinical Knowledge Graph Benchmark for Long-Tail Medication-Concept Ranking."

Pricing the Memoryless Assumption GitHub
Independent AI-Control Study Sep 2026

- Reconstructed 80 baseline splits and ran 1,000-round simulations on one split with 30 paired seeds and five safety settings. Delayed attacks increased accepted backdoors in two settings; the tested feedback strategy showed no added benefit over a matched random-timing control.

ENGINEERING EXPERIENCE

Ford Motor Company Dearborn, MI
Software Engineering Intern, Enterprise Technology May - Jul 2025; May - Jul 2026

- Co-built a fleet repair-quote prototype to help technicians check replacement history and compare shop prices. The system used six MCP servers, FastAPI, and a React/TypeScript interface; handed the prototype to full-time engineers for production preparation.
- Owned four production Python/Airflow pipelines consolidating records from 10+ vendors in Snowflake, with data validation, duplicate-safe retries, and failure alerts.

SamSearch Vancouver, BC
Software Engineering Intern May - Aug 2024

- Built retrieval-augmented government-contract search using FastAPI, the OpenAI API, and Astra DB, linking generated answers to supporting passages.
- Developed ingestion and chunking pipelines; reduced production p95 response time by 40% through async Python optimization and supported overnight on-call work.

SELECTED ENGINEERING PROJECT

Mirage GitHub
Policy Enforcement for AI Agents 2026

- Built a Python/FastAPI gateway that checks AI agents' routed HTTP requests against deterministic developer policies, with log-only and blocking modes.
- Implemented shared YAML policy evaluation for runtime traffic and mocked CI runs; recorded per-run action traces and exposed command-line checks that fail on policy violations.
- Developed a React/TypeScript console to inspect requests and policy decisions; published the Python integration as mirage-ci on PyPI, with Docker packaging and GitHub Actions checks.

TECHNICAL SKILLS

Languages: Python, SQL, C++, TypeScript/JavaScript | **ML:** PyTorch, PyKEEN, scikit-learn, NumPy, pandas
Engineering: FastAPI, Airflow, Docker, Git, pytest, PostgreSQL, Snowflake
Research: Graph learning, experimental evaluation