

WILLARD NILGES

nilges.me | github.com/willnilges | linkedin.com/in/will-nilges
will.nilges@gmail.com | 614-940-0388

EDUCATION

ROCHESTER INSTITUTE OF TECHNOLOGY

May 2023 | GPA: 3.45 - Cum Laude

B.S. Computer Engineering

EXPERIENCE

DATADOG

May 2022 - August 2022 & August 2023 — Present

Software Engineer II - Cognition Platforms

- Leading team of Cloud Integrations and Cognition Platform engineers to build new metadata storage platform with **Kafka**, **Cassandra**, and **gRPC** in **Go**. Enabling faster updates to cloud resources and tags in Datadog's backend. Using **Claude Opus** and **GLM-5** to accelerate development with custom **AI** tools.
- Implemented and migrated to hashring-based load balancing scheme for host intake pipeline using **Redis** and **Python**. Reduced ingestion latency by 70%, and compute costs of associated ingestion services by 51%.
- Collaborated cross-team to remediate uncontrolled growth of Postgres RDS database and prepare colleagues to migrate database safely. Reduced database size by 36% with no downtime.

QUALCOMM

May 2021 — August 2021

Interim Engineering Intern - Core Power

- Implemented debugging suite in **Python**, **C**, and **PRACTICE** to accelerate development for mobile power management subsystems. Reduced time to prepare debugging environment on real hardware from hours to minutes.

COUNCIL ROCK

May 2020 — December 2020 & August 2021 — December 2021

Software Engineering Co-Op

- Overhauled **C++** and **JavaScript** UX/UI for InverSol home solar solution to improve stability, correctness, and ease of use. Reduced customer support tickets and time to resolution.
- Re-wrote wireless stack in custom **Yocto Linux** firmware to improve solar unit connectivity.

ACTIVITIES

NYC MESH

Install Leader, Technical Lead

- Led team of 5-10 volunteers to build compute infrastructure and software tools to assist installers and improve customer experience. Onboarded new programmers and contributed upstream to dependencies.
- Led multiple large-scale install events for members of Mil Mundos En Común mutual-aid group. Connected >30 underprivileged families in Bushwick.
- Presented on work multiple times, including at Texas Linux Fest 2025.

COMPUTER SCIENCE HOUSE

SysAdmin, Executive Board

- Acted as Research and Development Executive Board facilitating projects, seminars and approving purchases.
- Directed team of >30 members through creating Bluetooth tracking-powered game for ImagineRIT 2022.
- Assisted with migration to Wayfair Donation hardware in Spring 2022, tripling compute capacity and providing 10-year upgrade from previous servers.

PROJECTS

CLEARGAUNTLETS (C++, 5 contributors)

CLEARGAUNTLETS.GITHUB.IO

- Created more immersive VR by building affordable (\$220 BOM), durable, and repairable force-feedback finger tracking gloves.
- Led a team of 5 multi-disciplinary engineering students through proposal, ideation, prototyping, implementation, and delivery.
- Contributed to LucidVR. Presented completed project at ImagineRIT 2023, demoed to dozens of visitors.

WRAITH ENGINE (C)

GIT.CHOM.SH/WILNIL/WRAITH-ENGINE

- Fully custom 3D engine in **C** for arena movement shooter. Uses **OpenGL**, **Flecs**, and **Open Dynamics Engine**.
- Features data-driven entity component system, serialized level files for asset import with geometry-based collision and physics.

MESHDB (Python, 34 stars, 16 contributors)

GITHUB.COM/NYCMESHNET/MESHDB

- Designed and implemented **Django** app and **Postgres** database to track >2500 installations, improve volunteer tools and data availability. Enabled new use-cases and tools by providing well-documented API. Built on distributed baremetal infrastructure.
- Identified and managed customer requirements. Migrated from legacy system with minimal day-to-day disruption.

INKPATH (C++, 30 stars, 3 contributors)

GITHUB.COM/WILLNILGES/INKPATH

- Xournal++ plugin using **OpenCV** for transcribing hand-written notes. Contributed API code to popular open source project to enable future plugin work.