

# GERRIT KROT - SOFTWARE ENGINEER

Masters Graduate with a strong background in Artificial Intelligence and Graphics Programming.

✉ gerritnkrot@gmail.com

☎ (215) 767-9175

🌐 linkedin.com/in/gerrit-n-krot

🔗 gerritkrot.github.io/

## WORK EXPERIENCE

### Software Developer

#### Waygate Technologies

📅 January 2023 – June 2023

📍 Skaneateles, NY

- Acted as primary developer on proprietary Windows Forms Application
- Wrote User Stories, Features, and managed Azure Dev Ops Repository

C#

.Net

WPF

XAML

AWS

### Software Development Intern (2 Rotations)

#### Ansys

📅 August 2021 – July 2022

📍 Remote

- Wrote Unit tests for Ansys Apps (Spaceclaim, Discovery)
- Integrated the ability to run python scripts in app for Unit Tests
- Updated inter-software communication API

C#

Python

gRPC

Git

## PROJECTS

### Stage Lighting Recognition using a Genetic Algorithm

#### [gerritkrot.github.io/articles/StageLightingReplication](https://gerritkrot.github.io/articles/StageLightingReplication)

- Developed Unreal plugin that learns lighting information from an image
- Uses a genetic algorithm to solve lighting directions and intensities

C++

Unreal Engine

### Self-tuning Firefly Algorithm Analysis

- Reproduced a self-tuning Firefly Algorithm developed by Xin-She Yang.
- Analyzed meta-meta-heuristic impact on algorithmic performance

### Ray Tracing Prism Simulation

#### [gerritkrot.github.io/articles/PrismSimulation](https://gerritkrot.github.io/articles/PrismSimulation)

- Created ray tracer that considers different frequencies of light
- Simulates light refracting through a prism to create a rainbow effect
- Uses backwards ray tracing methodology with projected volumes of light

### Charity Stream Management Software

#### [gerritkrot.github.io/articles/StreamOverlays](https://gerritkrot.github.io/articles/StreamOverlays)

- Developed UI Applications to show Donation Goals and notifications
- Helped run multiple charity streams that raised over \$8,000 for the Stonewall Charity Foundation and Save the Children

C#

Unity

Godot

## ACADEMICS

### Rochester Institute of Technology

#### Masters Computer Science

📅 Graduated December 2024

- 4.0 GPA

## RELEVANT CLASSES

- Intro to Machine Learning (CSCI635)
- Bio-Inspired Intelligent Systems / AI (CSCI633)
- Applications in Virtual Reality (CSCI715)
- Global Illumination (CSCI711)
- Secure Coding (CSCI642)
- Programming Language Theory (SWEN740)

## SKILLS

Machine Learning

Technical Writing

User Story Management

WPF

Unreal Engine

AWS

Git

Multi-threaded Development

Visual Studio

Scrum Development Process

## LANGUAGES

C++

C#

Open GL

CUDA

HTML/CSS

Javascript

Python

Java

Basic

Assembly MIPS

## EXTRACURRICULARS

### RIT Esports

#### Operations Admin

📅 August 2019 - Present

- Oversee all Esports events, streams, graphic design and marketing materials
- Developed "Competitive Leap," A program that helps casual players make the jump to competitive play