Timothy Clocksin

SOFTWARE ENGINEER & DEVELOPER

PERSONAL DETAILS

timothy.clocksin248@gmail.com
linkedin.com
+1 (603) 800-1151
Durham, New Hampshire, United States
US Citizen

SOFT SKILLS

- Problem Solving
- Analytical Thinking
- Philosophy & Logic
- Teaching
- User/Developer Communication

SKILLS

- Programming
- Debugging
- Algorithims
- Networking
- Software Design
- Documentation
- Project Management
- Software Rendering
- Graphic Design
- 3D Modeling

SOFTWARE

- Git
- Github
- Linux
- Visual Studio
- ChatGPT
- Django
- OpenGL
- BitBucket
- Jira
- Bugzilla
- Microsoft Excel
- Microsoft Word
- Docker

SUMMARY

Computer Science graduate from the University of New Hampshire, awarded 1st place at the 2022 UNH Undergraduate Research Conference in Computer Science Applications. Experienced through an internship at the UNH Interoperability Lab and current contributor to projects at NCS Global. Passionate about computer graphics and cutting-edge software engineering, with a focus on delivering efficient, robust solutions and advancing technical expertise.

WORK EXPERIENCE

SOFTWARE ENGINEER **November, 2023 - Present**

NCS GLOBAL SERVICES LLC

Designing and implementing advanced ITAD software solutions with a focus on secure data erasure, system diagnostics, and quality assurance. Streamlining workflows through process automation to enhance efficiency and reliability. Maintaining and upgrading software to meet evolving industry standards in IT asset disposition.

- NIST and DOHS Compliance: Implemented and led the compliance process for EcoErase, the company's proprietary data erasure tool, ensuring adherence to industry standards.
- System Testing Tool Redesign: Revamped a critical testing tool, reducing execution time by 20%, memory usage by 80%, and program size, while improving thread safety, scalability, and system detection.
- DevOps Infrastructure Overhaul: Modernized DevOps with advanced version control, a streamlined CI/CD pipeline, and a centralized documentation platform, boosting team productivity by 50% and reducing collaboration errors by 70%.
- Machine Learning: Utilized deep-learning to train an AI for estimating system prices based on system specs and condition.

JUNIOR SOFTWARE DEVELOPER **May, 2023 - November, 2023**

NCS GLOBAL SERVICES LLC

Maintaining and enhancing software by resolving bugs, implementing improvements, and collaborating with users to deliver requested features. Ensuring high code quality through adherence to industry best practices, while leveraging strong problem-solving skills and attention to detail. Continuously expanding expertise in programming and development tools to drive team success.

- Optimized PXE Boot Server: Reduced technician setup time from 120 seconds to under 15 seconds, boosting system processing efficiency by 45% for over 10,000 systems annually.
- Improved Test Efficiency: Resolved issues to cut test time by 25% per system and expanded memory testing coverage from 1 MB to multiple GB.
- Streamlined Testing Tools: Developed a custom Linux OS as a unified solution, eliminating redundant boot and shutdown times.
- Communication: Interacting with end-users to identify goals and improvements.

LANGUAGES

- Java
- C/C++
- Rust
- Python
- Bash
- Slint
- C#
- SQL
- HTML/CSS/JavaScript
- Scala
- TLA
- TCL
- .NET

INTERN **December, 2018 - September, 2022**

UNH INTEROPERABILITY LAB

Began as an IPv6 tester, validating devices for USGv6 compliance. Transitioned to a software developer role, contributing to the development of the INTACT tool and testing suites to support USGv6 standard conformity.

- Designed 50+ testing scenarios and topologies using diverse networking devices, firmware updates, packet captures, and detailed documentation.
- Maintained and enhanced the Java-based INTACT™ tool by refactoring code, debugging, reducing redundancy, documenting APIs, and adding new features.
- Developed 100+ Python and Tcl scripts for IPv6 and IPsec protocol testing on INTACT™, improving efficiency by reducing command duplication by 67%.
- Streamlined complex Tcl scripting operations into single commands, enhancing usability and performance.
- Coordinated Agile workflows using Atlassian tools (Jira, Confluence, Bitbucket, Bamboo) and reviewed 200+ code changes.

VOLUNTEER TEACHER **June, 2022 - July, 2022**

MAMELODI INITIATIVE

- Made 2-hour lesson plans once a week for students and other teachers to follow.
- Worked individually with students to improve their math and English skills. At the end of the program, many students saw at least a 30% increase in performance.
- Taught a coding workshop that introduced students to computer science and programming

---

PROJECTS

ALBACORE VR EXPERIENCE

https://timothyclocksin.info/Pages/albacore.html

Collaborated with a team of 4, UNH, and the USS Albacore Museum to develop a VR application improving museum accessibility for people with disabilities. Created immersive materials, modeled submarine rooms, and implemented features like interactive objects, periscope functionality, and motion-sickness reduction. Optimized 3D assets using Blender and Unity LOD tools, cutting polygon count by 50-75%. Debugged app performance in Quest 2 with Android Studio and profiling tools. Led 60% of technical work, including Oculus API integration, testing, optimization, and deployment. Project won 1st place at the 2022 UNH Undergraduate Research Conference in Computer Science Applications.

PATH-TRACING ENGINE

https://github.com/Teetlez/Rust-Raytracer

A monte carlo path-tracer written in Rust following the "Raytracing in One Weekend" book. I used this project both as a way to build my skills with rendering and to better learn Rust. Support for lambertian, glossy, metallic, and dielectric materials, Support for spheres, rectangles, triangles, and polygonal objects, Customizable settings, Saving to png, Custom scences, HDR environment lighting, ACES tonemapping, and BVH scene optimization.

EDUCATION

UNIVERSITY OF NEW HAMPSHIRE **2018 - 2022**

Bachelor's degree Computer Science
