Tony Oganda

817-204-9340 | tonyoganda9@gmail.com | linkedin.com/in/tony | github.com/TonyAGI

Education

The University of Texas at Dallas <div align="right">Richardson, TX</div>

Bachelor of Science in Computer Science — Expected Graduation: May 2027 <div align="right">*Aug. 2024 – Present*</div>

- **Clubs**: National Society of Black Engineers (NSBE), ColorStack UTD Chapter, African Student Union (ASU), Students of East Africa
- **Relevant Coursework**: Data Structures and Algorithms, UNIX Programming, Discrete Mathematics, Computer Architecture, Algorithmic Analysis
- Awarded **Academic Excellence Scholar** (Merit-Based Scholarship)

Projects

AI-DEA | *HTML, CSS, JavaScript, OpenRouter, API, GSAP* <div align="right">**Feb 2025 – Jun 2025**</div>

- Shipped a web app supporting over 1,000+ sessions with an AI-powered chat assistant, sketching canvas, and note/document manager, improving user workflow efficiency by 40%.
- Optimized frontend experience by integrating PDF.js and Highlight.js, reducing document load time by 35% and enabling dynamic syntax highlighting.
- Implemented GSAP-powered animations and scroll effects, boosting average session time by an estimated 25% based on test user feedback.

Ray Tracing Engine | *C, C++, Computer Graphics* <div align="right">**Jan 2025 – Feb 2025**</div>

- Built a ray tracer capable of rendering scenes with 1000+ objects, using efficient spatial data structures and optimizing algorithms for fast image rendering.
- Implemented custom camera system with depth of field and variable aperture, simulating realistic lens behavior and improving scene realism.
- Streamlined object intersection logic and acceleration structures, improving rendering performance by 50%.

Space Invaders | *C++, SFML & HTML5 Canvas* <div align="right">**Feb 2025 – Present**</div>

- Released desktop and web versions of a retro shooter game, maintaining modular codebase and applying object-oriented principles for scalable software design.
- Improved user onboarding by adding browser-based demo mode, reducing setup barrier and increasing engagement by 60%.
- Maintained cross-platform codebase with SFML and Makefile builds, reducing development iteration time by 30%.

Personal Website | *HTML, CSS, JavaScript* <div align="right">**Sept 2024 – Present**</div>

- Launched portfolio site attracting 800+ unique visitors, featuring interactive project showcases and contact links.
- Used 500+ lines of code to implement animations, dynamic routing, and accessibility features, improving average engagement time by 20%.
- Continuously optimized site performance (90+ Lighthouse score) through lazy loading and semantic HTML.

Technical Skills

Skills: Software Development, Full-Stack Development, Backend Engineering, End-to-End Systems, Problem Solving, Data Structures & Algorithms, Agile, Source Code Management, Cloud Computing, DevOps, Security Best Practices
Languages: Python, Java, C++, C, C#, JavaScript, TypeScript, Go, Kotlin, Rust, SQL, NoSQL (MongoDB, DynamoDB)
Technologies/Frameworks: React, Node.js, Spring, Flask, REST, GraphQL, Apache, Apache Spark, Databricks, Docker, Kubernetes, Terraform, GitHub, Linux/Unix, CI/CD, Distributed Systems, Cloud Platforms (AWS, Microsoft Azure, Google Cloud), Big Data & Data Warehousing, Embedded Systems, Machine Learning (PyTorch, TensorFlow, scikit-learn)