

Yousif A. Aldolaijan

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Experiences

Senior Software Engineer - [Mozn](#)

January 2023 - Present

Software Engineer - [Mozn](#)

January 2021 - January 2023

- Designed, implemented, maintained, and supported features for an Anti-Money Laundering (AML) and Compliance SaaS called [Focal](#).
 - Daily update our internal name matching algorithm with new sanctioned and politically exposed individuals and entities data for up-to-date name matching.
 - Rescreen millions of monitored individuals and entities on a daily basis.
 - Risk management feature with customizable scoring and matching rules.
 - Refactored legacy functionality to support evolving requirements and a faster development lifecycle.
 - Reduced request latency by implementing a caching layer for database queries using Redis.
- Made our internal name matching library production-ready
 - Supported updates for the internal library which included data migrations and regression testing.
 - Increased throughput and reduced latency by batching, multi-threading, and load balancing.
 - Support custom user data for name matching with support for all existing name matching features.
- Spearheaded the utilization and integration of profiling, tracing, and metrics in our development lifecycle for better observability, maintenance, and understanding of user behavior.
- Provisioned and instrumented infrastructure required to manage and maintain Focal on Oracle Cloud Infrastructure (OCI) and Amazon Web Services (AWS) utilizing Kubernetes (K8s), Docker, and Terraform.
- Supported the design and implementation of supporting functionality built on top of the base AML features.
- Lead teams of 4-12 engineers by assisting with system design, optimization, code review, and onboarding.

Molecular Dome (Moldome) - Nanographics Internship

Summer 2020

- Finalized the implementation of a molecular visualization framework to be used in projection domes using C++ and the SGCT library under the guidance of Dr. Peter Mindek and Dr. Ivan Viola.
- Implemented camera controls, animations, and post-processing effects within a scene of thousands of objects.

Multiscale Molecular Visualization (Marion) - Nanovisualization Lab at KAUST

January 2020 - May 2020

- Converted a multiscale molecular visualization tool from an OpenGL to Vulkan renderer using C++ and GLSL under the guidance of Prof. Ivan Viola.

Google Software Engineering, Tools and Infrastructure Internship

Summer 2018

- Generating and enforcing access control that restricts remote procedure calls in an integration testing framework. This feature allowed developers to verify if their services are hermetic under the guidance of Robert Dryke.

Education

Master of Science in Computer Science - 3.96 Cumulative GPA

August 2019 - December 2020

King Abdullah University of Science and Technology, Thuwal, Saudi Arabia (KAUST)

Bachelor of Science in Computer Science

August 2015 - December 2018

University of Southern California, Los Angeles, CA (USC)

Projects

Software Rasterizer and Raytracer

August 2019 - December 2019

- Developed a software-based C++ rasterizing and ray-tracing renderer that implements: Transformations, Blinn-Phong Shading, Texture Mapping, Soft Shadows, Anti-aliasing, and Glossy Reflections.

Controls Lead - USC Hyperloop Design Team

August 2016 - May 2018

- Lead the controls team to develop the autonomous control system of the USC hyperloop pod.
- Control logic was programmed in C on a Texas Instruments MCU. Communications between subsystems were facilitated using CAN, TCP/IP, UDP, GPIO, and ADC.
- Built a Ground Control System to provide remote telemetry and emergency stop and manual control of the pod.

Skills

- **Programming and Frameworks:** Python, Celery, FastAPI, SQLAlchemy, C++, C, OpenGL, Vulkan, GLSL.
- **Tools:** Git, Docker, MySQL, Redis, Docker Compose and Swarm, Kubernetes, Terraform, Bash, CMake.