Donesh Davatgar

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Education

University of Houston **Houston, TX**

B.S. Computer Science *Aug. 2020 - Graduated*

Notable Coursework:

- Artificial Intelligence, Linear Algebra, Software Design, Database Systems, Operating Systems, Computer Networks, Data Structures and Algorithms, Numerical Analysis

Wharton County Junior College **Sugar Land, TX**

A.S. Computer Science *Aug. 2018 - Aug. 2020*

Experience

British Petroleum (BP) **Houston, TX**

Data Engineer *June. 2024 – Present*

- Engineered event-triggered data ingestion pipelines in Azure Data Factory to process raw NWD files into structured metadata via Databricks, integrating the results into BP's Enterprise Knowledge Graph (EKG) and powering VAM 3D, a near 1:1 interactive digital twin of on-site rigs, to deliver unified, high-context operational data across the enterprise.
- Led DevOps enablement for a Data Modeling and Contextualization team, implementing CI/CD pipelines and integrating tools like Azure DevOps, JFrog, and Checkmarx to accelerate deployment cycles from development to production while ensuring security and code quality at scale.
- Collaborated cross-functionally with across teams, such as Product Management and Optimization, enabling seamless data ingestion through Azure Data Factory and Databricks while extending DMCDT-developed services, including event-triggered pipelines to accelerate adoption and unify workflows across BP's digital ecosystem.

Combat Designer **Houston, TX**

Unreal Engine C++ Programmer *June. 2023 – Present*

- Built modular and robust combo systems by creating custom GAS extensions using gameplay tags, data asset–driven abilities, and custom ability tasks to sync player input with animation, resulting in scalable branching combos, precise input timing, and responsive state machine–style chaining for both player and AI-controlled characters.
- Engineered a highly extensible gameplay architecture using data structures, such as data assets and gameplay tags, to dynamically assign abilities, an animation layering interface for seamless context-based transitions, and a modular ability framework enabling designers to configure Attributes, Gameplay Effects, Gameplay Cues, and Gameplay Events without code changes, supporting rapid iteration and future expansion.
- Programmatically integrated a wide range of assets: including skeletons, animations, Niagara VFX , and even Lyra's modular gameplay systems, embedding them into into custom combat logic and systems, to enhance responsiveness, feedback, and polish, for a more immersive experience.

Projects

From The Ashes: Reborn | Unreal Engine C++, Gameplay Ability System

- Designed and implemented a dynamic combat system for a fast-paced, cyberpunk hack-n-slash action game, featuring combo chaining, mid-combo branching, aerial combat, and multi-weapon capabilities, powered by Unreal Engine's Gameplay Ability System (GAS) and a highly robust C++ source code.
- Established a weapon-centric character architecture by creating a tightly coupled weapon-to-character system, where equipped weapons dynamically define the character's combat identity, including ability sets, animation blueprints, gameplay tags, and core attributes, enabling seamless transitions between weapon types and deep customization through data-driven design.
- Engineered a versatile AI system by leveraging a shared player framework with GAS, enabling full access to combat abilities and animation logic, and enhanced it with a custom token system that regulates enemy attack permissions, ensuring staggered, coordinated assaults while using Unreal's perception system for reactive, intelligent behavior that adapts to player actions in real time.

Skills

Technologies: Unreal Engine 4/5, Perforce, Git, GitHub, Databricks, Azure Dev Ops, Azure Data Factory, VMs, CI/CD, Linux, Agile, REST APIs
Languages: C++, C, Python
Databases: MySQL, Microsoft SQL Server, SQL Alchemy, MongoDB