CHILAKALAPUDI SAI VENKATA GANESH

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SUMMARY

Game Engineer specializing in Unity and C# with strong foundations in data structures, and performance optimization. Experienced in building scalable gameplay systems, custom engine tooling, and gameplay mechanics. Passionate about architecting maintainable, performant client systems and contributing to immersive player experiences.

EXPERIENCE

Amgo Games | Unity Game Developer

Jan 2025 - Present

- Delivered multiple mobile game projects in Unity using C#, from rapid prototyping to production.
- Built scalable gameplay systems, editor tools, and performance optimizations.
- Worked cross-functionally with design and art teams to implement game features efficiently.
- Contributed to the development of creative ads and promotional gameplay content for successful game titles.

PROJECTS

Stickman Flow - Mobile (Color Sorting)

- Developed a custom level editor and procedural generation tool, enabling automated creation of balanced puzzle levels through configurable difficulty parameters, passenger distribution logic, tunnel progression, hidden content placement, and validation systems.
- Designed and implemented a robust move-analysis algorithm powering the Hint system, evaluating all possible board states and available actions in real time to recommend the most effective player move.
- Built an automated gameplay simulation (Auto Play) system leveraging the same decision-making logic as the Hint engine, enabling rapid level validation, solvability checks, and live progression testing directly within the editor.
- Optimized large-scale crowd rendering for mobile platforms using GPU Instancing, batching, shared materials, and object pooling techniques, achieving stable 100 FPS with approximately 500 simultaneous crowd characters on screen.
- Implemented performance-focused gameplay by analysing through Frame Debugger, Profiler tools and architectured pooling systems, allocation-free runtime workflows, and efficient crowd management, significantly reducing CPU overhead and garbage collection spikes on mobile devices.
- Collaborated closely with game designers to rapidly prototype, iterate, and tune gameplay systems, FTUE flows, progression mechanics, and procedural generation parameters.

Association Match - Mobile (Category Match)

- Developed a modular level design tool with a centralized database for managing level categories, enabling organized and efficient content creation.
- Designed and implemented an intuitive drag-and-drop interface, significantly streamlining the level creation workflow.
- Built a grid-based level design system with data stored in Scriptable Objects, improving scalability, maintainability, and data management.
- Contributed to gameplay development by implementing new features and interactive mechanics, enhancing player engagement and overall game experience.
- Collaborated with designers and developers to integrate level design tools and gameplay systems into the production pipeline.

Merge Sticker Decor - Mobile (Match-3)

- Engineered custom Unity Editor pipelines to auto-generate prefabs and structured game data assets.
- Designed optimized collider detection systems to minimize physics overhead while maintaining interaction accuracy.
- Refactored gameplay systems to reduce coupling between UI and game logic layers.
- Partnered with design teams to implement scalable level logic supporting iterative balancing and content expansion.

Color Connect Number - Mobile (Grid Connect puzzle)

- Designed and implemented a grid-based level editor with serialized data structures to streamline level creation.
- Developed a BFS-based pathfinding system with turn constraints to efficiently detect valid matches.
- Built a queue-driven event system to handle match resolution asynchronously, reducing unnecessary per-frame computations.
- Structured gameplay logic using state machines to ensure deterministic and debuggable game state transitions.

Sheep Master - Mobile (Grid puzzle)

- Architected a rule-driven tile grid system supporting modular tile behaviors and extensible gameplay logic, enabling rapid iteration and scalable level design.
- Developed a comprehensive in-editor level design toolkit with validation, and visual debugging tools, significantly accelerating content creation workflows.
- Implemented snake style drag movement constrained to grid logic, integrating obstacle detection and dynamic path validation.

Additional Game Projects On Portfolio : game projects

ArrowOS | Founder & Lead Developer | github.com/ArrowOS *2018 - 2022*

- Architected CI/CD pipelines using Jenkins and automated build parameterization systems.
- Designed secure distribution infrastructure using token-based authentication and centralized database coordination.
- Handled end-to-end server-side setup, including deployment pipelines, Apache configuration, and production environment management.
- Led system-level debugging and code reviews to maintain codebase stability across device variants.
- Managed distributed contributors and enforced version control best practices using Git and Gerrit.

More Projects On Portfolio : svganeshch.github.io

TECHNICAL SKILLS

Game Development: Unity *(Proficient)*, Unreal Engine *(Foundational), State Machines, Game System Designs*
Programming: C#, C++, Java, Bash scripting

Web Development: PHP, HTML, JavaScript, MySQL, Apache

CI/CD & Version Control: Jenkins, GitHub, Gerrit
Soft Skills: Leadership, Project Management, Quick Learner

EDUCATION

ICAT Design and Media College *2021 - 2025*
Bachelors in Computer Science & Game Development *GPA - 8.0*
