

# SHANTANU PANDEY

## SENIOR SOFTWARE ENGINEER



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*Experienced developer with 8 years of experience ranging from software firms to game studios. A creative thinker and a team player, I am passionate programmer with strong proclivity towards video games and AI.*

## WORK EXPERIENCE

### NICE inContact

Senior Software Engineer | C# and C++ | Sandy, UT, USA | Aug' 2019 - (Current)

- **RESTful Api:** Developed a flexible and scalable bot microservice compatible with various vendors (e.g., Google, MS, Amazon, Kore.ai), ensuring consistency and user-friendliness. Solution enabled customers to seamlessly integrate their own bots into existing IVR and chat capabilities. Initiated and cultivated this greenfield project, demonstrating leadership by expanding the team across three countries, and made it one of the highest revenues generating product for the company.
- **AWS Cloud Technologies:** CloudFormation scripts for deployment using Jenkins, CloudWatch logging, setting up error queries, and creating alarms for real-time monitoring and enhanced operational efficiency.
- **Performance monitoring and optimizations:** Added counters/clocks across various components and using them to generate a baseline and identify bottlenecks/latency issues. Using Prometheus and Grafana for real time monitoring.
- **Async Programming:** Technical lead for major overhaul of exiting codebase to follow async patten along with dependency injection. The initiative started when we saw degrading performance when handling large number of requests.

### Center of Medical Innovation

Game Engineer | Unity Engineer (C#) | Salt Lake City, UT, USA | Jan' 2018 - May' 2019

- Android application developer (Unity Engine/C#) - Working in collaboration with a clinician to develop applications/games aimed towards assisting in improving geriatric depression in elderly.
- Full ownership of all the apps/games developed during the time period. Development duties also included web dashboard for the clinician, SQL database management for the patients' data and setting up secure server (https protocol) for communication.
- Some game-play systems include adaptive difficulty system, image processing, endless level generation and code profiling and optimization.

### Accenture Services Pvt. Ltd.

Software Engineer | SharePoint/Web Developer | Bengaluru, IN | Feb' 2013 - May' 2017

- SharePoint development by utilizing C# for client-side logic, integrating and customizing solutions (workflows, forms) to meet business requirements for efficient and scalable applications.
- Experienced in crafting dynamic and interactive user interfaces using JavaScript and jQuery to ensure seamless user experiences, and expertise in utilizing HTML and CSS for designing and implementing responsive, visually appealing SharePoint sites and applications.
- Oversee, manage, and mentor new resources. Leadership duties that involved status reporting, task allocation/management, and occasional team lead responsibilities.

## PERSONAL PROJECTS

- **Video Games AI (C++)** - Basic movement algorithms (arrive, seek, flee, etc.), path-finding algorithms (A-star, Dijkstra), collision avoidance, behavior trees, blackboards and state machines.
- **Enemy AI (Mobile Game Samurai Crusader)** - In Unreal Engine using blueprints and C++, implemented various enemy behaviors like follow, kiting, etc. along with other systems like game modes, spawning, UI engineering etc.
- **Boss AI (PC Game Hard Light Vector)** - In Unreal Engine using blueprints and C++, I worked on the boss battle design and boss AI including attacks, their interaction with player and how the character moves in a large-scale environment.
- **Rapid Prototyping (Engineering)** - Small playable slices/concepts using different engines such as Phaser (HTML5), Unity/MonoGame (C#, VR), Unreal (C++), and self-made engine in C++.

## SKILLS

C/C++	JavaScript
C#	jQuery
Unreal Engine	CSS
Unity	SQL
AWS Cloud Technologies	HTML
Async Programming	GitHub
Linear Algebra and 3D Math	Prometheus
Microservice Development	Grafana

## GAMES

Hard Light Vector - *On Steam*

Samurai Crusader - *On Google Play*

NeuroGrow - *Successful Clinical Trials*

Dyslexia VR

Diana's Inferno

Think - Plus

Game Engine Components (C++)

- Memory Manager
- AI Component
- Audio Component
- Math Library

## EDUCATION

### UNIVERSITY OF UTAH

Salt Lake City, UT [2017 - 2019]

Masters in Game Engineering (EAE Program)

### BHARATI VIDYAPEETH

Pune, Maharashtra [2008 - 2012]

Bachelor of Technology in Computer Engineering