Gaurav Baney

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EDUCATION

University of Southern California, Los Angeles
M.S. Computer Science **|** Graduation: May 2021
B.S. Computer Science (Games) **|** Graduation: May 2020
Cumulative GPA: 3.49

WORK EXPERIENCE

Microscape - USC Bridge Institute (Unity/C#)   *(Feb 2019 – Present)*
Software Engineering Intern, Los Angeles
- Microscape is a VR application used to visualize microscopic samples in a 3D space.
- Enabled cross platform support for Oculus, Vive and Other VR platforms using Steam VR.
- Integrated Steam VR's laser pointer with in-game UI sliders, to reduce necessary player movement.
- Improved UI experience by separating menu functionality into individual action sets, reorganizing menu UI, and polishing laser pointer to display hit point and color identifiers for each player.
- Connected Microscopic Image Asset Shader to HSV functions that update in real-time.

Ubisoft Entertainment India (Python/C++)   *(Jun 2019 – Jul 2019)*
Software Engineering Intern, Pune, India
- Worked on localization of a 2D mass multiplayer platformer with a player base of over 10 million.
- Eliminated 42% of redundant values by updating string filtering algorithm used to populate Localization Database
- Enhanced performance of game by fixing memory leak caused during autosave bug in the Level Editor.
- Investigated bug causing FPS to drop from 60 to 11, using custom and PIX Profilers. Presented a detailed report to senior engineer that is now being used to fix the problem.
- Refactored 7% of the codebase to better support string replacement during Localization.

PROJECTS

Group Scheduler (Python)   *(Jan 2020 - Present)*
- Created a script that creates a calendar heatmap that can be used to schedule group events.
- Script uses user submitted data pulled from Google Sheets API and decides heatmap gradient based on user inputted thresholds. Currently working on expanding the scope of the project to a full-stack app.

3D Game Engine (DirectX/C++)   *(Apr 2019)*
- Integrated various subsystems such as SIMD Math, Lighting, Profiling and Collisions for the engine.
- Built the graphics pipeline that supported JSON based scene construction and interpolated animation.
- Wrote shaders for Phong lighting, object rendering and Bloom post processing of game scene.

LEADERSHIP

Obtuse (Android, Unity, C#)   *(Aug 2019 – Present)*
Lead Producer, Los Angeles
- Communicating, coordinating and executing creative vision of game with a cross country team of 11 including engineers, designers and artists.
- Managing workflow using weekly KANBAN boards, and SCRUM sprints to meet milestones.

Sigma Phi Delta – Professional Engineering Fraternity   *(May 2018 – Jan 2019)*
House Manager, Los Angeles
- Orchestrated renovations costing around $20k, over the course of a month, to improve living conditions for 20 tenants.
- Coordinated relations with the University regarding organization activities and structure.

SKILLS

Technical Languages (Proficient): Java, C++, Python
Technical Languages (Familiar): C, SQL, JavaScript, HLSL, HTML, CSS
Tools: Eclipse, Visual Studio, Git, Unity, DirectX 11, SDL, Maya, Photoshop, Trello, Slack